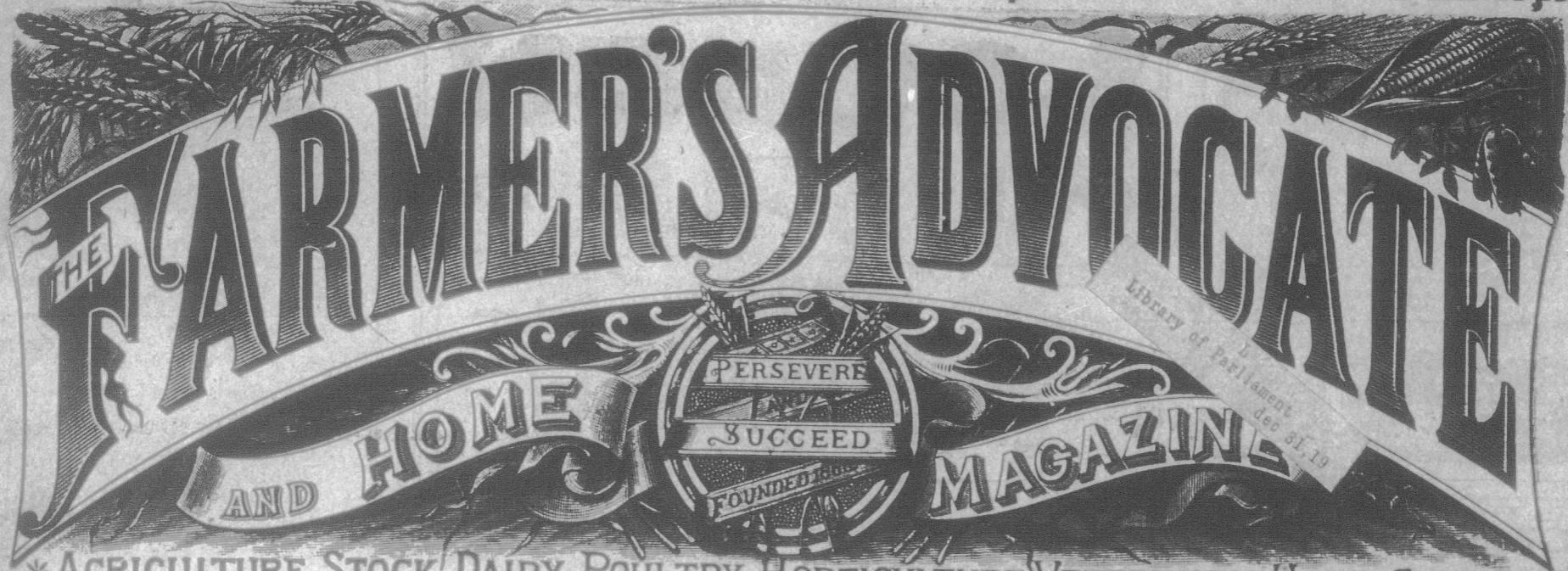


APRIL 10, 1919

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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LONDON, ONTARIO, APRIL 17, 1919.

No. 1386

**THE NAME GUARANTEES
 ITS EXCELLENCE**

**PURITY
 FLOUR**
 (Government Standard)

"MORE BREAD AND BETTER BREAD AND BETTER PASTRY"

Western Canada Flour Mills Company, Limited
 HEAD OFFICE: - TORONTO, ONTARIO

CANADA FOOD BOARD LICENSE NOS.: CEREAL, 2-609; FLOUR, 15, 16, 17, 18

"PURITY OATS MAKES BETTER PORRIDGE"

Work



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HYLO SILO

Sweet Fresh Ensilage down to the last forkful

THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

Write for prices and catalogue. AGENTS WANTED.

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The Wonderful—Light-Running Gilson Thresher

"Goes like Sixty"



Saves Time—Money—Labor. Be independent of the gang. Keep your farm free of weeds. Do your threshing when you please, with a 6 to 12 h.p. Engine and the Wonderful Light-Running Gilson Thresher. Furnished with or without Blower. Send for full particulars.

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WE SELL NETS AND NETTING OF ALL KINDS. WRITE FOR PRICES.

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Hay Season is Short—Hay Crop is Valuable

A day's delay or a sudden storm in haying may mean a heavy loss. Wherever hay must be handled quickly and economically you can depend on

LOUDEN HAY TOOLS

Honestly built—simple—sturdy construction—stronger than your work will ever demand—safety first—use good judgment.

LOUDEN EQUIPMENT IS A PROFITABLE INVESTMENT, NOT AN EXPENSE

You will be surprised how little really high grade equipment costs. Send us lengths of your mow, whether centre drive or end unloading and width space between rafters. Can furnish slings, grapple, or harpoon fork at your option.

GET INTERESTED WRITE TO-DAY

If you are building or remodelling, our barn plan book will save you Worry, Time and Money; it's free, also our large illustrated catalogues.

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Head Office and Factory: CRIMEA ST., GUELPH, ONTARIO
Branches with complete stocks:
Martin Ave., Winnipeg, Man. Pender St. West, Vancouver, B.C.
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Tear off Coupon now and mail it To-day.

The Louden Machinery Co. of Canada, Ltd.
493 Crimea St., Guelph, Ont.


My barn is.....ft. long, rafters are spaced.....ft.....inches apart,
we unload from..... I prefer to use..... (state
whether Grapple or Harpoon Fork or Slings.

Please send me free, postpaid, your large illustrated books, marked below:


<input type="checkbox"/> Barn Plan Book.	<input type="checkbox"/> Feed and Litter Carriers.	<input type="checkbox"/> Horse Stable Fittings.
<input type="checkbox"/> Hay Tools.	<input type="checkbox"/> Stalls and Stanchions.	<input type="checkbox"/> Barn Door Hangers.
<input type="checkbox"/> Grapple Hay Forks.	<input type="checkbox"/> Water Bowls.	<input type="checkbox"/> Garage Door Hangers.

I expect to build new barns size.....x.....in month of.....
I expect to equip present barns in month of..... I keep
.....Cows.....Horses.....Calves. I prefer to deal through
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My Name.....P.O.....Prov.....

Tractors and Threshers



WATERLOO BOY
The Simplest, most Accessible, most Powerful
3-Flow Tractor on the market.
Suitable for hauling 3 Flows, Threshing, Silo
Filling and General Farm Work.



Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clear and save expense.

Write for free catalogue, prices and any information wanted.

THE ROBT. BELL ENGINE & THRESHER COMPANY, LIMITED
Seaforth, Ont.
Also Steam Tractors, and large size Threshers.



The KIND of a FENCE To Buy

is the kind that gives the largest return of real Fence Satisfaction. Best made, easiest to build, wears longest. Looks good, requires less posts, works well over uneven ground—up hill or down.

How to Order
Write us about your fencing needs. The kind, the purpose, the amount, and we will tell you exactly what it will cost at your station. Shipped—fresh made—from our Factory direct to you. Descriptive literature, price list and order blanks for the asking. Do it now. We are the Farmers' Friend.

THE SARNIA FENCE CO., Ltd.
Windsor, Hamilton, Sarnia, Ontario

THIS SPACE

In the April 24th issue is reserved for the first announcement of

THE DIXIE-ACE

The Latest and Most Sensational Tractor Success

WATCH FOR IT



"Goes Like Sixty"

This Engine Will Cost You Nothing

You need an engine—get a Gilson on our new easy payment plan, and it will pay for itself. You have the work for it to do this fall and winter; help is scarce and high-priced—save yourself a lot of worry, and enjoy that "Feeling of Security" which is such a definite part of the staunch, reliable Gilson Engine.

Gilson Engines have long enjoyed an indisputable reputation for dependability, power, simplicity and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of everything you have been buying have been soaring, but by careful management we are able to furnish Gilson Engines at remarkably low prices. Write to-day for catalogue, price, and easy payment plan, stating what size you are interested in.

Gilson Mfg. Co. Ltd., 259 York St., Guelph, Ont.

Losses By Lightning

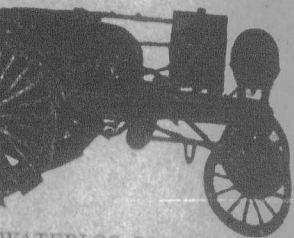
The Fire Marshall's Report show that in May 1918, 151 Unrodded Buildings were damaged by lightning to the extent of \$121,012.00, and that there were No Lightning Losses on Rodded Buildings in that month.

Now is the time to consider Rodding your Building. Write us for Printed matter.

The Universal Lightning Rod Co'y,
HESPELER ONTARIO
Made in Canada

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WATERLOO BOY
most Accessible, most Powerful
on the market.
Handling 3 Plows, Threshing, Silo
and other Farm Work.



Tractors, Threshers, suitable size to
all Tractors and Gasoline Engines
for threshing. Keep your farm clear
of weeds. Catalogue, prices and any infor-

BT. BELL ENGINE &
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Toronto, Ont.

tractors, and large size Threshers.



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is the kind that gives
the largest return of
real Fence Satisfaction.
Best made,
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wears longest. Looks
good, requires less
posts, works well over
uneven ground—up
hill or down.

How to Order
Write us about your
Fencing needs. The
kind, the purpose,
the amount, and we
will tell you exactly
what it will cost at your
place—fresh made—from our
plant to you. Descriptive literature
and order blanks for the sake
of convenience. We are the Farmers' Friend.

ONTARIO FENCE CO., Ltd.
Toronto, Ontario

Engine Will
Do Nothing

Get a Gilson on
payment plan, and it will
do the work for you
all winter, help in
spring—save yourself
and enjoy that "Feeling
of Dependability."
More attractive propo-
sals have been buying
high class Gilson Engines at
easy payment plan.

Guelph, Ont.

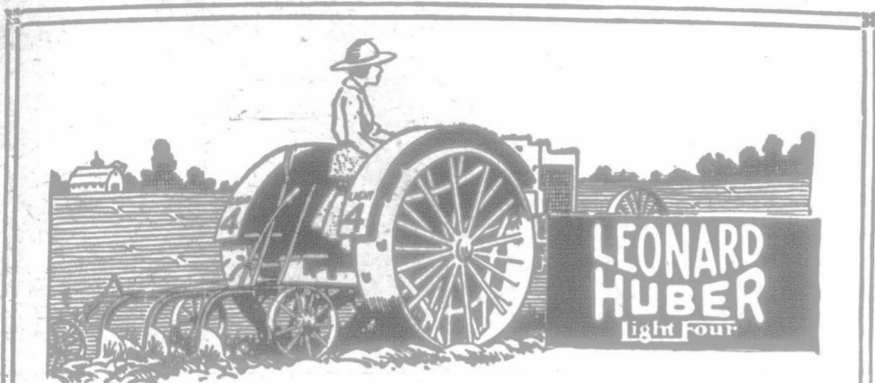
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Unrodded Buildings
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Co'y,
ONTARIO

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This Tractor Fills the Bill for the Canadian Farmer

IT IS the all-year-round helper that takes the "arm" out of "farm."

Built to last and give thorough satisfaction at every point. Its light weight causes it to run on less fuel than others, and prevents it packing the soil; yet it has plenty of power for its work and is strongly constructed to meet the hard usage a tractor will get.

THE
**LEONARD-
HUBER**
Light Four

12-24

sets new standards among tractors for Economy, Simplicity and Durability. It will do all kinds of field work and all your heavy belt work besides. 40 years of experience makes it make good. Read how it works for you all year 'round:-

SPRING Plow, harrow, drill, pull manure spreader, cultivate, haul loads.	SUMMER Pull binder, hay loader, drive clover huller, threshers, plows.	AUTUMN Run cutting box, corn shell-grinder and do plow, haul grain etc.	WINTER Run saw, feed grinder and do all other belt work you have.
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Write for illustrated folder "Doing the Impossible."

Address Engine Dept.

E. LEONARD & SONS
LIMITED

LONDON - CANADA

Just Put Clothes In—the Washer Does the Work

If you have a gasoline engine—if you have electric power then no longer need you even work the lever of a hand-operated power washing machine. Let "power" help your work as it does your husband's!

Of course you realize that a washing machine, even run by hand, is quicker, easier, better than washing by muscle-power. But here's a washer that does everything—all you have to do is "turn on the juice."

Maxwell
Power Bench Washer

—will do the washing while you do other work! No need to watch it—it can't go wrong. It will do the wringing too. Easy to operate—simple and strong in construction—perfect in mechanism. Made in one-, two-, or three-tub size; operated equally well by 1/2 h.p. electric motor, or any gasoline engine. Write us to-day for full particulars—it will be time well-spent.

38 MAXWELLS LIMITED, Dept. W ST. MARYS, Ont.

Wash Day Made Easy for \$2.00



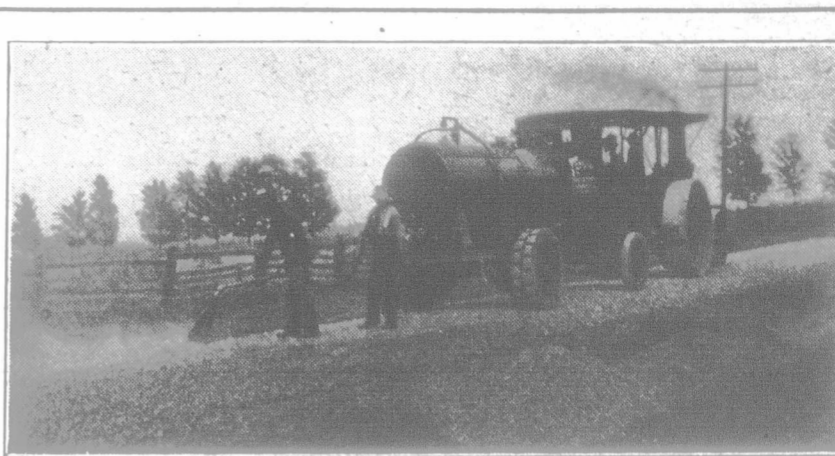
Don't miss this chance to get our wonderful Compress and Vacuum Clothes Washer—best, strongest and most complete Vacuum Washer. Will wash a tub of white or colored clothes in three minutes—will wash anything from the finest laces to the heaviest blankets without a chance of injury. Used for rinsing, bluing or dry cleaning with gasoline.

Abolishes labor of wash days—saves rubbing and wearing out of the clothes, saves tired backs. A child can use it. Women discard \$20.00 machines for it. Get the best. Don't buy a cheap washer. Satisfaction guaranteed or money refunded.

To prove to every woman that this is the best Vacuum Washer, we will send it complete with long handle and exhaust protectors, postpaid, for only \$2.00. Order one to-day. Don't wait.

Agents wanted to sell these washers and other high-class articles.

GRANT & McMILLAN CO., Dept. AL 14 387 Clinton St., Toronto, Ontario



Applying "Tarvia-X" on Kennedy Road, Scarborough Township, Ont. Toronto & York Roads Commission.

Making an all-year-round road with tarvia—

ALL the year round this Tarvia road will be smooth, dustless, mudless and ready for business!

As the picture shows, the layer of broken stones has been spread and rolled and now the steam-roller

Made in Canada
Tarvia
Preserves Roads
Prevents Dust-

Behind the tank-wagon other men are spreading over the Tarvia surface a thin layer of fine crushed stone or gravel which the roller will presently roll down into the Tarvia.

Thus is built a Tarvia-bonded

macadam road that defies even our Canadian frosts, and withstands heavy motor-truck and swift automobile traffic.

Such is the ideal road for rural thoroughfares, because it is economical to maintain and will last three to five times as long as plain macadam, although it is only slightly more expensive to construct.

The Tarvia flows down among the broken stones, filling up the chinks, coating the stone, and cementing it together.

We have booklets about Tarvia which we should be glad to send you if interested.

The **Barrett** Company

LIMITED

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A harness that breaks under strain is a risk to life and limb and besides, it takes time and money to repair it. Get Harness that is "dependable," that holds together and keeps in fine condition under all reasonable circumstances. IMPERIAL BRAND HARNESS is guaranteed free from defect in material or workmanship. We have been in the harness business for 52 years and our goods have always given unqualified satisfaction. Your dealer sells it; if he doesn't, write direct to us—we can supply you promptly. We are manufacturers and can offer a big assortment at attractive prices. Express delivery charges paid at our end.



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Our "Buggy Special," No. 104, is a big seller. It is thoroughly STRONG, HIGH GRADE AND FINE LOOKING. We particularize on this and have put extra value into it. Select leather of good weight. Single strap Breast Collar, raised layers; strong Traces; Breaching has side, back and hip straps; Saddle has patent leather skirts and jockeys, padded, leather linings and flexible tree and 1 in. swinging shaft bearers; Lines 1 in. with russet hand parts; Trimmings heavily nicked. Solid Nickel, \$2. extra. Genuine hard rubber \$4. extra. Express prepaid to any station on receipt of price. Guaranteed satisfactory or goods may be returned. Order now

\$28
Samuel Trees & Co., Ltd
Established 1866. 48 Wellington St. E., Toronto

NORTHERN ONTARIO

Millions of acres of virgin soil, obtainable at 50c. an acre in some districts—in others free—are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario a home awaits you.

For full particulars as to terms, regulations and settlers' rates, write to:

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G. H. FERGUSON, Minister of Lands, Forests and Mines

Getting the Most From Mother Earth

The Part Played by Correct Lubrication

With ever-widening markets for their crops, progressive farmers have realized that animal power long ago reached its limit of production.

So they turn to mechanical power, as have men in other industries. With mechanical power they plow deeper, work faster, and cultivate a much bigger acreage.

The tractor has become a standard agricultural implement. It shortens labor.

The great war demonstrated two big things:

- 1—That mechanical power multiplies crop results.
- 2—That mechanical power, operated and maintained at highest efficiency, gets the ultimate out of Mother Earth—at costs per acre far below any ever before recorded.

You know the difference in power results and economy, between tractor engines that operate at maximum efficiency and those which are constantly breaking down in service.

FOR PASSENGER CARS

The passenger car has entered the farmer's life as a business as well as a pleasure vehicle. Its correct lubrication is as important as the lubrication of your tractor.

Write for booklet "Correct Lubrication," containing complete Gargoyl Mobiloils Chart of Recommendations. There is also a complete discussion of automobile problems and troubles.

IMPERIAL OIL LIMITED

Manufacturers and Marketers of Polarine Motor Oils and Greases
Marketers of Gargoyl Mobiloils in Canada

BRANCHES THROUGHOUT CANADA

For years a constantly increasing number of engine users have turned to the correct grade of Gargoyl Mobiloils, because the correct grade keeps their engines delivering their best. Gargoyl Mobiloils engineers, after years of careful research have produced the authoritative Chart of Tractor Recommendations shown in part on the right. The Chart shown here tells



Mobiloils

A grade for each type of motor

at a glance the correct grade of Gargoyl Mobiloils for a number of the most prominent makes of tractors, both summer and winter use.

Farmers who get the most out of their tractors, follow the Gargoyl Mobiloils Chart of Recommendations as the authoritative guide to correct tractor lubrication.

An instructive booklet on the Correct Lubrication of Tractors, and containing complete Chart of Recommendations will be sent on request. In buying Gargoyl Mobiloils from your dealer, it is safer to purchase in original packages. Look for the red Gargoyl on the container.

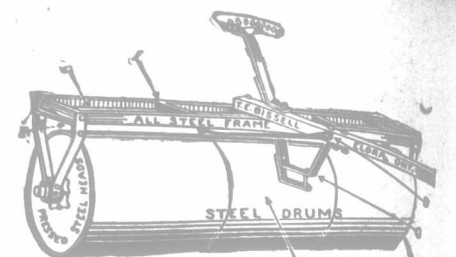
CORRECT TRACTOR LUBRICATION

Explanation—The four grades of Gargoyl Mobiloils for tractor lubrication, purified to remove free carbon, are:

Gargoyl Mobiloil "A" Gargoyl Mobiloil "BB"
Gargoyl Mobiloil "B" Gargoyl Mobiloil Arctic

In the Chart below, the letter opposite the tractor indicates the grade of Gargoyl Mobiloil that should be used. For example "A" means Gargoyl Mobiloil "A," "Arc" means Gargoyl Mobiloil Arctic, etc.

TRACTORS	1918		1917		1916		1915	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Albough-Dover (Square Turn)	BB	A	BB	A	BB	A	BB	A
Allis-Chalmers	BB	A	BB	A	BB	A	BB	A
All Work	BB	A	BB	A	BB	A	BB	A
Andrew	BB	A	BB	A	BB	A	BB	A
Appleton	BB	A	BB	A	BB	A	BB	A
Aultman-Taylor	BB	A	BB	A	BB	A	BB	A
Avery (18-30)	BB	A	BB	A	BB	A	BB	A
Avery (5-10 HP)	BB	A	BB	A	BB	A	BB	A
Bates (Louisville)	BB	A	BB	A	BB	A	BB	A
Bean Track Pull	BB	A	BB	A	BB	A	BB	A
Best (8-16)	BB	A	BB	A	BB	A	BB	A
Big Bull	BB	A	BB	A	BB	A	BB	A
Bower City	BB	A	BB	A	BB	A	BB	A
Buckeye (Indiana)	BB	A	BB	A	BB	A	BB	A
Buckeye (Indiana) GiantBaby	BB	A	BB	A	BB	A	BB	A
Buckeye (Ohio)	BB	A	BB	A	BB	A	BB	A
Case (9-18)	BB	A	BB	A	BB	A	BB	A
Case (10-20)	BB	A	BB	A	BB	A	BB	A
Case (12-25)	BB	A	BB	A	BB	A	BB	A
Case (20-40)	BB	A	BB	A	BB	A	BB	A
Chase	BB	A	BB	A	BB	A	BB	A
Cleveland	BB	A	BB	A	BB	A	BB	A
Common Sense	BB	A	BB	A	BB	A	BB	A
C.O.D.	BB	A	BB	A	BB	A	BB	A
Corn Belt	BB	A	BB	A	BB	A	BB	A
Creeping Grip	BB	A	BB	A	BB	A	BB	A
Emerson-Brantingham (EB)	BB	A	BB	A	BB	A	BB	A
Emerson-Brantingham (EB) (Big Four)	BB	A	BB	A	BB	A	BB	A
Emerson-Brantingham (EB) (Reeves)	BB	A	BB	A	BB	A	BB	A
Farm Horse	BB	A	BB	A	BB	A	BB	A
Flour City	BB	A	BB	A	BB	A	BB	A
Flour City (Heavy Duty)	BB	A	BB	A	BB	A	BB	A
Galloway	BB	A	BB	A	BB	A	BB	A
Gas Pull (Rumley Co.)	BB	A	BB	A	BB	A	BB	A
Grain Belt	BB	A	BB	A	BB	A	BB	A
Gray	BB	A	BB	A	BB	A	BB	A
Happy Farmer	BB	A	BB	A	BB	A	BB	A
Hart Parr (Model B)	BB	A	BB	A	BB	A	BB	A
Heider	BB	A	BB	A	BB	A	BB	A
Holt Caterpillar	BB	A	BB	A	BB	A	BB	A
Holt Caterpillar (Model 45)	BB	A	BB	A	BB	A	BB	A
Holt Caterpillar (Model 18)	BB	A	BB	A	BB	A	BB	A
Imperial	BB	A	BB	A	BB	A	BB	A
Imperial Forty	BB	A	BB	A	BB	A	BB	A
Ingers	BB	A	BB	A	BB	A	BB	A
Kardell	BB	A	BB	A	BB	A	BB	A
K.C. Prairie Dog	BB	A	BB	A	BB	A	BB	A
Kinkadee	BB	A	BB	A	BB	A	BB	A
Lion	BB	A	BB	A	BB	A	BB	A
Little Chief	BB	A	BB	A	BB	A	BB	A
Little Giant	BB	A	BB	A	BB	A	BB	A
Maytag	BB	A	BB	A	BB	A	BB	A
Minneapolis	BB	A	BB	A	BB	A	BB	A
Mogul (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Mogul (I. H. Co.) (8-16)	BB	A	BB	A	BB	A	BB	A
Moline Universal	BB	A	BB	A	BB	A	BB	A
New Age	BB	A	BB	A	BB	A	BB	A
Nichols & Shepard	BB	A	BB	A	BB	A	BB	A
Nilon	BB	A	BB	A	BB	A	BB	A
Oil Pull (Rumley Co.) (14-28, 10-20, 20-40)	BB	A	BB	A	BB	A	BB	A
Oil Pull (Rumley Co.) (Rumley Co.)	BB	A	BB	A	BB	A	BB	A
Parrett	BB	A	BB	A	BB	A	BB	A
Prona	BB	A	BB	A	BB	A	BB	A
Flow Boy	BB	A	BB	A	BB	A	BB	A
Flow Man	BB	A	BB	A	BB	A	BB	A
Pontiac	BB	A	BB	A	BB	A	BB	A
Rumely (8-16)	BB	A	BB	A	BB	A	BB	A
Russell (Little Four)	BB	A	BB	A	BB	A	BB	A
Sandusky	BB	A	BB	A	BB	A	BB	A
Simplex	BB	A	BB	A	BB	A	BB	A
Standard	BB	A	BB	A	BB	A	BB	A
Strait	BB	A	BB	A	BB	A	BB	A
Titan (I. H. Co.)	BB	A	BB	A	BB	A	BB	A
Tom Thumb (4 cyl.)	BB	A	BB	A	BB	A	BB	A
Twin City (Model 15)	BB	A	BB	A	BB	A	BB	A
Twin City (Model 16)	BB	A	BB	A	BB	A	BB	A
Wallis Cub (Junior)	BB	A	BB	A	BB	A	BB	A
Waterloo Boy	BB	A	BB	A	BB	A	BB	A
Wisconsin	BB	A	BB	A	BB	A	BB	A
Yuba	BB	A	BB	A	BB	A	BB	A



BISSELL LAND ROLLERS

are all steel except the Pole. They are braced and stayed to stand all kinds of hard work and wear well. The entire frame, bottom and all, is built of steel. The (18) anti-friction Roller Bearings make light draught.

The Draw Bracket and low hitch do away with neck weight.

The Axle revolves with the drums and there is no squeaking or grinding.

The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL. These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is "built for business," that stands up against lots of hard work.

Ask Dept W for free catalogue.

T. E. BISSELL CO. LTD.
ELORA, ONT.

We have doubled our factory capacity and are determined to supply our customers far and near. See ad. also on page 794.



You should have our free illustrated folder on the "IDEAL" line of farm fence, farm gates, etc. Ask for Folder G

Ideal Fence

IDEAL FENCE & SPRING CO. OF CANADA, LIMITED
WINDSOR, ONTARIO
(Formerly The McGregor-Banwell Fence Co., Limited)

STAMMERING

or stuttering overcome positively. Our special methods permanently restore normal speech. Graduate pupils everywhere. Free advice and literature.
THE ARNOTT INSTITUTE
KITCHENER, CANADA

BOYS BUY THIS HAND CULTIVATOR DIRECT FROM THE FACTORY

It's a strong, light, handy tool made of steel with white Ash Handle 4 1/2 and 5 ft. long. For hand cultivating loosening up the soil, making earth ready for Garden or Flower beds, and for raking it has no equal.



Send one Dollar (\$1.00) Post Office Money Order for two or Two Dollars (2.00) for four. State length of Handle, if not satisfied money refunded.

Save Wholesalers and Retailers profit and help us to advertise it.

Canadian-Warren Axe & Tool Company, Limited

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Choice Seed Corn—White Cap and Bailey, equal to any we have ever offered. Also the best in Poland China swine. Prices moderate.

GEO. G. GOULD, Essex, Ontario

Kiln Dried Seed Corn

That will grow. Government test 100%. Your money back if not satisfied.

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R. R. No. 1, Arner, Ont.

PATENTS Trade Marks and Designs

Special attention given to patent litigation. Pamphlet sent free on application.

RIDOUT & MAYBEE
156 Yonge Street, Toronto, Ontario.

Shinn-Flat Protects Property

Worry No More About Lightning

Lightning cannot harm any building equipped with Shinn-Flat Lightning Rods—this we guarantee when we make the installation.

Protection of this kind enables you to sleep better during the season of electric storms.

Lightning caused a loss, through Barn Fires, last year in Canada, of one and a half million dollars, and Government Statistics prove that this terrible waste could have been avoided if the barns had been protected with dependable lightning rods.

Shinn-Flat

LIGHTNING RODS PROTECT

SHINN-FLAT is the only Lightning Conductor in Canada or United States made in accordance with the latest scientific discoveries. Its exclusive flat-woven form is endorsed by the most eminent authorities in the electrical field as being superior.

How about your barn or residence? The time to install Shinn-Flat Lightning Rods is before the lightning strikes. Don't wait to think it over—the time to act is now.

Shinn Flat Lightning Rods are installed by men who have been carefully trained under the direction of Prof. Wm. H. Day—Canada's well known authority on Lightning Prevention.

Prof. W. H. Day realizing the importance of efficient Lightning Rods scientifically installed is now devoting his entire time to advancing the use of Shinn-Flat Conductors. You will profit by these services.

SHINN'S CASH BOND is issued by a large Bonding Company to the owner of every building protected by Shinn Flat, guaranteeing that Lightning will not strike. This is the only company that covers the work of its representatives by a Cash Bond.

FREE—Our illustrated book "Cause and Control" by Professor Day describes Shinn Flat Rods and tells how the reduction in the insurance premiums pays for cost of installation.

SHINN MANUFACTURING CO. OF CANADA, Limited
Factory and General Offices Prof. W. H. Day,
GUELPH - ONT. Department A Sec'y.



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Made in Canada

DEALERS
We have openings for reliable men Write for our special agency proposition.

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SELL LAND ROLLERS

steel except the Pole. are braced and stayed to all kinds of hard work and well. The entire frame, and all, is built of steel. (8) anti-friction Roller makes light draught.

low Bracket and low hitch with neck weight.

Revolves with the axle and there is no squeaking.

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D AT THE HEEL. od features are not all

advantages of the "Bis-er. Many more good

built into them, mak- Roller that is "built

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abled our factory capa- determined to supply rs far and near. See ad- o on page 794.



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Made by The F.E. Partridge Rubber Company, Limited, Guelph Ont.

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Are you content to go on in the old-fashioned way using all your available farm help planting by hand, limiting your acreage because of labor scarcity, and keeping your help away from other pressing work in busy season?

Get an O-K Canadian Dial Planter and get your planting done accurately without seed waste and in a fraction of the usual time.

The O-K Canadian is the only planter that has the endless cup seed dropping device. It does not pick or bruise the seed. It is noted for being the most accurate system yet invented.

From the roomy steel hopper the seed is picked up by cups and deposited on revolving dial plate. This makes it simple to make any corrections necessary. Absolutely one piece of seed goes to each hill, thus making your seed go farther. Five years' tests demonstrate accuracy close to 100 per cent.

The O-K Canadian has equipment for correct depositing of fertilizer. Furrows are opened by two shoes. The first opens a trench to receive the fertilizer. The second shoe opens the furrow deeper, mixing fertilizer thoroughly with earth, thus protecting seed when dropped. This is correct and necessary for proper fertilizer results.

You certainly ought to get full particulars about the O-K Canadian, the machine that will enable you to put in more acreage into this profitable crop at low cost. Write to-night for free literature giving full particulars of O-K Canadian Planters and Diggers.

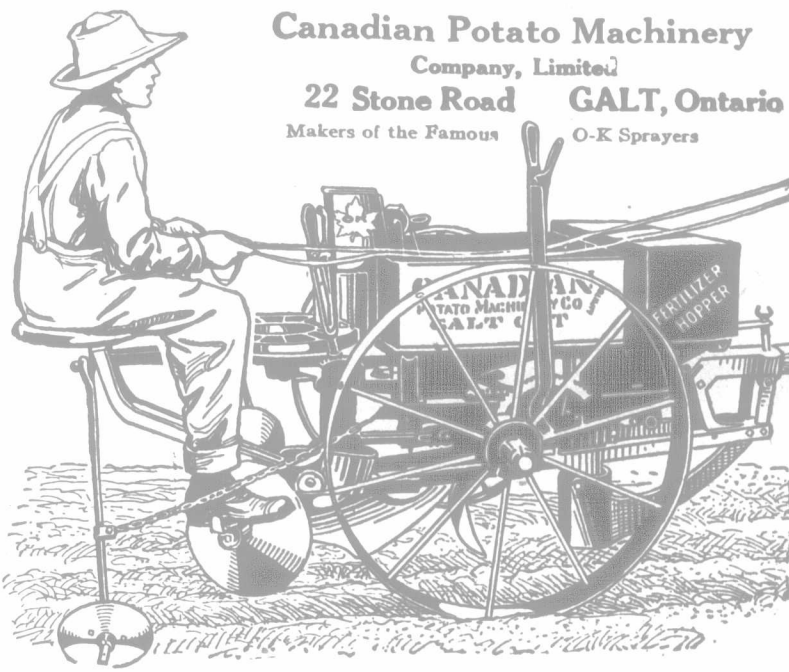
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Makers of the Famous O-K Sprayers



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It is not necessary to put up with loss of power and waste of oil and gas. Don't let badly fitting piston rings steal your motor's power and your gasoline. Install a full set of

McQUAY-NORRIS LEAK-PROOF PISTON RINGS

Increase Power—Decrease Carbon Save Gas

By creating uniform pressure on the cylinder walls, McQuay-Norris **LEAK-PROOF** Piston Rings stop piston ring leakage, increase power, decrease carbon and save fuel and oil.

Wherever you are you can get them to fit any car, truck and tractor. Jobbers and supply houses in over 300 distributing points carry complete stocks of standard sizes and over-sizes, backed by a factory stock of 3,000 unusual sizes. You don't have to wait—the rings are awaiting your order.

Send for Free Booklet "To Have and to Hold Power"—a simple, clear explanation of piston rings, their construction and operation.

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McQUAY-NORRIS Superoyl RINGS
A special ring for engines that pump oil.
Used in top groove only of pistons to control excess oil, with McQuay-Norris **LEAK-PROOF** Piston Rings in lower grooves to insure maximum compression and fuel economy.

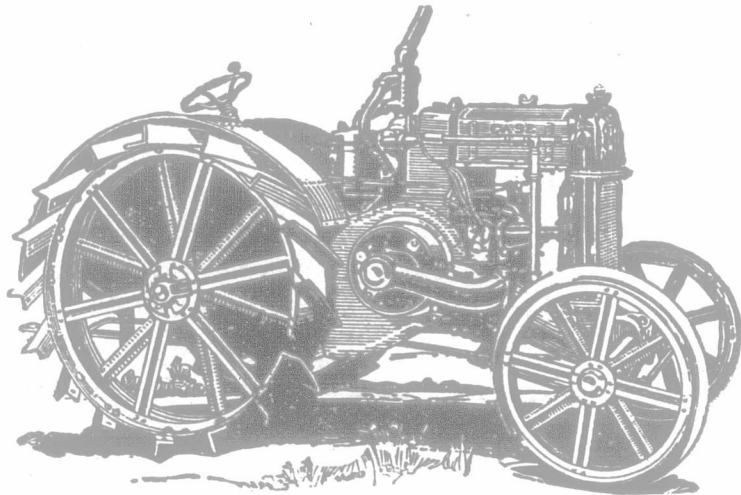
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Kerosene Tractors

provide an economical aid to increasing production on the farm at a time when production counts for much and a means to accomplish more work at a time when labor costs eat into profits.

The Case 10-20 Kerosene Tractor is more than an efficient tractor—it is moveable power unit capable of furnishing force for the operation of any of the farm machinery. It develops 10 horse power at the drawbar while ploughing, seeding or harrowing and 20 horse power for operating the ensilage cutter and silo filler, the saw mill, the feed grinder or performing any similar work.

Over three quarters of a century of farm machinery construction have made the Case the tractor you need on your farm. Write our nearest office today for more details about the Case 10-20.



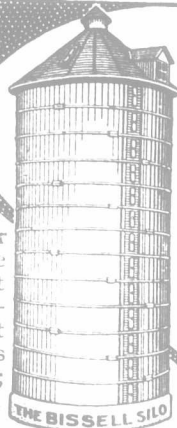
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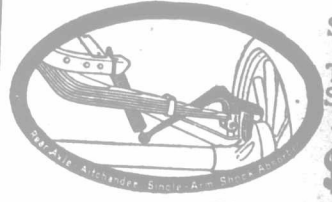
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This is the original cantilever-principle type, protected by Canadian Patent 172892—the logical shock-absorber for Ford cars. Easy to attach. No holes to bore. Weight per set, 20 lbs.



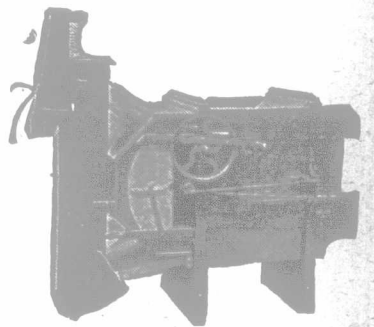
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Sold at Auction after Inventor died, when new ones could be got, at Twice the Price of new one To-day. The Public thought they would not get any more Kline Mills, in the vicinity of Beeton and near towns. It is the only mill that weighs and grades grain. In separating wild oats has no comparison. Capacity One Hundred bushels an hour; also, power attachment. Easiest mill to turn made. Write for particulars.

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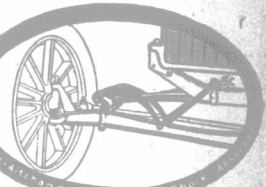
You cannot put any accessories on your Ford car that add more to your pleasure and convenience in riding, or more wear and tear on the self, than a set of

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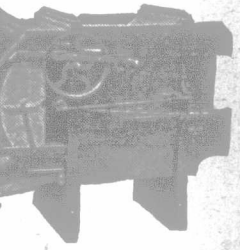


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Kline Mill

After inventor died, when he was at twice the price of new one thought they would not get it. It is the only mill that weighs in separating wild oats has no capacity one hundred bushels attachment. Easiest mill to use for particulars.

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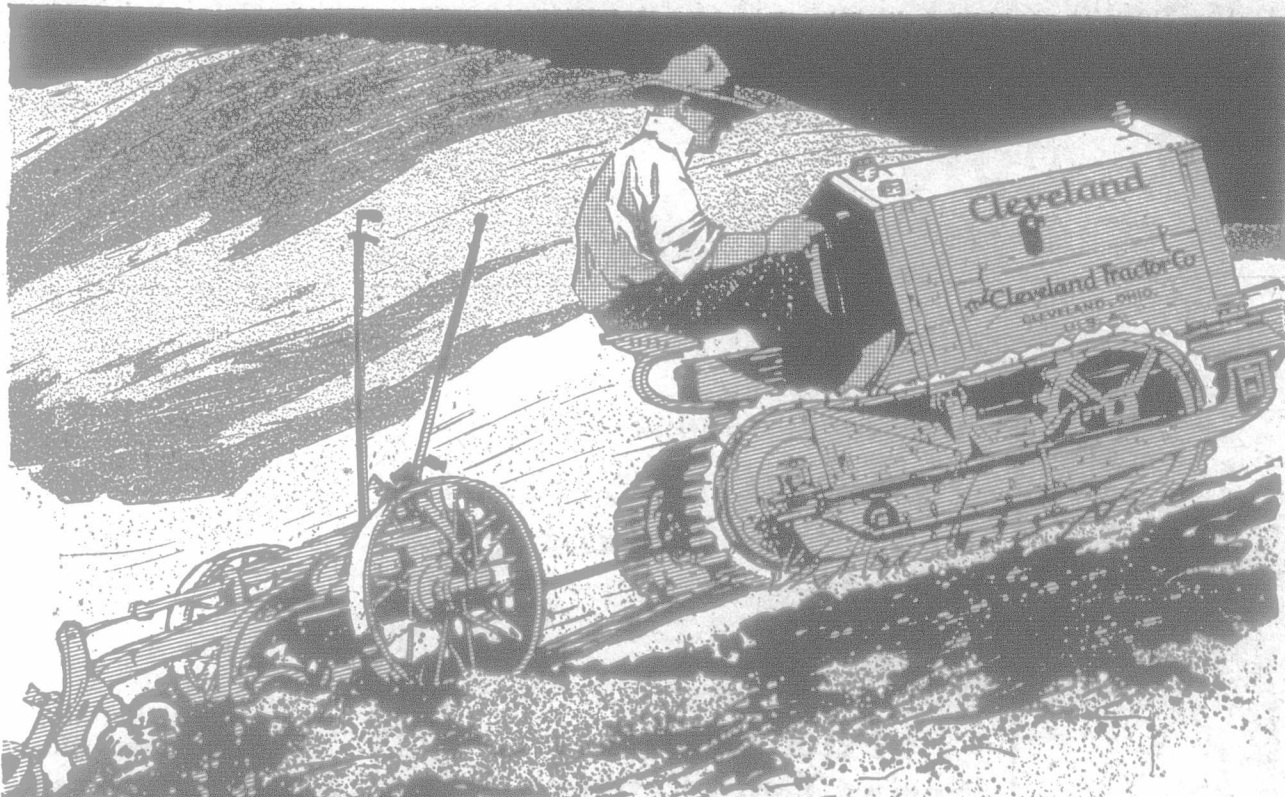
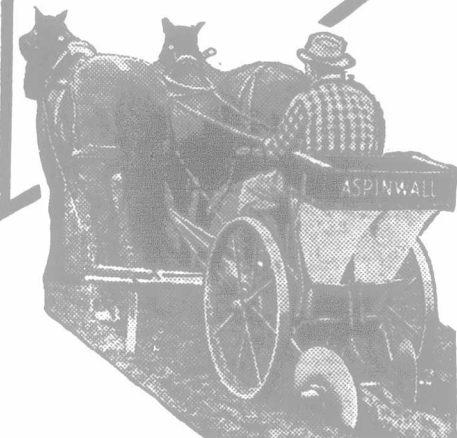
Plants More Acres Per Day Drawn by Team or Tractor

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Attachments for peas, beans and fertilizer furnished when desired. Attractive folders and complete catalog mailed on request. Write for FREE BOOK containing valuable data on potato growing.

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World's Oldest and Largest Makers of Potato Machinery: Cutters, Planters, Sprayers, Diggers, Sorters.



Show Me Facts!

BEFORE you buy any tractor you have every right to say to the manufacturer: "Show me what the USERS of your tractor have to say. Show me that it has already proved itself economical and practical in every-day work. Show me the figures your users have given you so that I may figure costs and so determine why I should own one of your tractors."

Here, then, is part of one of the large number of letters constantly received from farmers telling us what their *Cleveland Tractors* do for them.

To begin with, I used my Cleveland Tractor to plow about 305 acres during 1918 and used double discs, two 60 tooth harrows and a heavy wooden drag on one load for fitting.

When I plowed I covered from eight to ten acres a day with a two-bottom gang and covered about 40 acres a day with the harrows.

I harvested 150 acres of wheat and oats at 25 acres per day.

In July I used the Cleveland in loading hay, and got in the crop from 140 acres at the rate of about 35 tons a day.

Besides these things, I used my Cleveland for a great many belt jobs—put in 300 tons of ensilage in 32 hours, on 30 gallons of kerosene, for instance.

I now keep six horses, instead of the fourteen I had before and need two men less than previously.

My Cleveland is in excellent condition, ready for the 1919 season, and counting everything, I haven't spent over \$10 for repairs.

F. H. JOHNSON,
New Augusta, Indiana.

Such specific, definite facts tell why the Cleveland is so fully justifying the faith that so many farmers have placed in this compact, powerful Tractor. Write to-day for complete information and the name of your nearest Cleveland dealer.

The Cleveland Tractor Co.

19107 Euclid Ave.  Cleveland, Ohio

The largest producers of track-laying tractors in the world

THE CLEVELAND TRACTOR COMPANY OF CANADA, LIMITED

WINDSOR - - - - - ONTARIO

Cleveland Tractor

The Time Tried Cultivator



A Vital Point in Seeding

SEED must be deposited in a well-opened, finely pulverized, well-aired soil with plenty of moisture. The young plants and roots must have a well prepared seed-bed, else they cannot stool out and form a strong system. Fail at this vital point and your chances of a good crop are gone. The roots cannot spread out, the crop will be stunted in growth.

Peter Hamilton Spring Tooth Cultivator

will work your soil into a good seed-bed. It is designed to cut every inch of ground and thoroughly pulverize it to an even depth.

The arrangement of the sections to which the teeth are attached is such that the front and back rows act independently. There is no danger of one set of teeth cultivating deeper than another or vice versa. Furthermore, having so many sections gives the teeth more freedom of action, and when one tooth catches on a stone or root only two or three are jerked out of the ground instead of one half or all of the teeth. The teeth are made from very high grade steel and are reinforced with our patented helpers. The points of teeth are reversible, giving double wear. There is no chance of clogging when the teeth are in three rows.

The frame is strong, well braced and firmly trussed and cannot sag in the middle.

Write us to-day for illustrated booklet and make sure of having a Peter Hamilton Cultivator on hand for preparing a good seed-bed.

THE PETER HAMILTON CO., Limited
PETERBORO, Ontario 43

Is Your Thresherman A Grain Saver?

?

This is the most notable advance made in modern threshing. A device in the hopper returns to the separator the grain that would otherwise go to the stack. Users write us that this improvement saves one to three per cent more grain. Figure what that means to you.

Get the facts from any of the makers of North America's standard threshing machines listed below. Among these are the builders of the leading tractors and farm implements. All of them are prepared to supply threshing machines equipped with the Grain-Saving Stacker. Write to any of these for information.



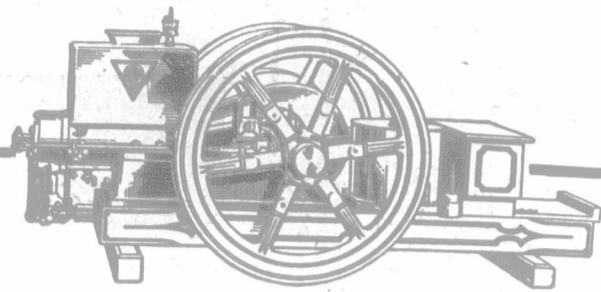
View looking into hopper showing grain trap near stacker fan; also auger running from beneath trap for returning the saved grain to separator.

Grain Saving Stacker

LIST OF MANUFACTURERS

- | | |
|---|--|
| Canada | United States |
| Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ontario. | A. B. Farquhar Co., York, Pennsylvania. |
| Dominion Thresher Co., Ltd., New Hamburg, Ontario. | Frick Company, Waynesboro, Pennsylvania. |
| Ernst Bros. Co., Ltd., Mt. Forest, Ontario. | Harrison Machine Works, Belleville, Illinois. |
| John Goodison Thresher Co., Ltd., Sarnia, Ontario. | Huber Mfg. Co., Marion, Ohio. |
| Hergott Bros., Ltd., Mildmay, Ontario. | Keck-Gonnerman Company, Mt. Vernon, Indiana. |
| MacDonald Thresher Co., Ltd., Stratford, Ont. | Minnesota Threshing Machine Co., Hopkins, Minnesota. |
| Aultman & Taylor Machinery Co., Mansfield, Ohio. | Port Huron Engine & Thresher Co., Port Huron, Michigan. |
| Avery Company, Peoria, Illinois. | The Russell & Company, Massillon, Ohio. |
| A. D. Baker Company, Swanton, Ohio. | Russell Wind Stacker Company, Indianapolis, Ind. |
| Banting Manufacturing Company, Toledo, Ohio. | Sawyer-Massey Co., Ltd., (United States Agency), Moline, Illinois. |
| Batavia Machine Company, Batavia, New York. | Swayne, Robinson & Co., Richmond, Indiana. |
| Buffalo Pitts Company, Buffalo, New York. | The Westinghouse Co., Schenectady, New York. |
| Cape Mfg. Co., Cape Girardeau, Missouri. | |
| J. I. Case Threshing Machine Co., Racine, Wis. | |
| Clark Machine Company, St. Johnsville, New York. | |
| Ella-Keystone Agricultural Works, Pottstown, Pennsylvania. | |
| Emerson-Brantingham Co., Rockford, Illinois. | |
| Farmers Independent Thresher Co., Springfield, Illinois. | |

The Grain-Saving Device Originated with The Indiana Manufacturing Co., Indianapolis, Ind., Who Also Originated the Wind Stackers



Alpha Engine RELIABILITY

RELIABILITY is the keynote of the Alpha. It RUNS when you want it to—chugs away all day and you never need to think about it.

It's always reliable; always ready.

Why?

Because it's so simply and sturdily designed and so expertly and honestly built.

There's nothing complicated about the Alpha—no electric batteries; no delicate attachments to "keep you guessing."

Just oil it; turn on the fuel—either gasoline or kerosene—and the Alpha does the rest.

It takes a whole lot of the drudgery out of farmwork, and, in addition, saves time and fuel.

Made in 12 sizes, 1 1/2 to 28 H. P.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER

LANDS WANTED FOR... SOLDIER SETTLERS

POWERS have been granted to the Soldier Settlement Board of Canada by Order in Council of the 11th of February, 1919, to purchase land to be re-sold to qualified returned soldiers who desire to make farming their permanent vocation.

To assist soldiers in settling in any suitable district in which they may wish to locate, the Soldier Settlement Board desires to have filed in each of their Provincial Offices a select list of farm lands available for purchase in each district of the Eastern Provinces, with full description and lowest cash prices of the same. Purchases by the Board will be paid for in cash.

The public are informed that this land is for purchase by returned soldiers, and must be of good agricultural quality, and reasonable price, making possible the success of the soldier as a farmer. It should be within seven miles of a railway, open, free from weeds, water supply assured, and of moderate price. In giving particulars, mention nearest market and school. In comparison with the vast supply of vacant lands, the number of farms immediately required will be very limited. Owners, therefore, will kindly assist the Board by offering for the present only land which fills the above requirements.

No commission will be charged or paid. No offers to sell will be binding on the person offering, unless a sale is effected, and no obligation will be on the Board to accept any offer.

If application from a returned soldier be received for the purchase of land, an inspection and valuation of such land may be made by the Board, as soon as free from snow. If approved, negotiations may be entered into for the purchase and sale thereof. An approved list is desired for each suitable district throughout Canada.

All communications concerning land in the Eastern Provinces should be addressed to the Provincial Supervisor of the Soldier Settlement Board for the province in which the land offered for sale is situated, a list of whom is given below:—

- | | |
|---|---|
| ONTARIO:
Mr. W. M. Jones, 32 Adelaide St. E., Toronto. | NOVA SCOTIA:
Mr. R. H. Congdon, 529 Barrington St., Halifax. |
| QUEBEC:
Lt.-Col. Bruce F. Campbell, Drummond Bldg., Montreal. | PRINCE EDWARD ISLAND:
Soldier Settlement Board, Riley Bldg., Charlottetown. |
| NEW BRUNSWICK:
Mr. Wm. Kerr, Post Office Bldg., St. John. | |

SOLDIER SETTLEMENT BOARD, Canada.

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The Report for 1918 of the Great-West Life Assurance Company is now in print, and a copy will be mailed to any interested person on request.

To those needing Insurance the Report will prove a remarkably interesting document showing as it does the notable prosperity and progress of the Great-West Life, and the gratifying results that are being accomplished for the Policyholders.

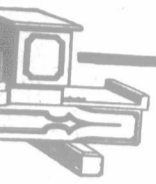
The whole report gives strong confirmation to the now widely-recognized claim that for profitable Life Insurance one cannot better the policies of

THE GREAT-WEST LIFE ASSURANCE COMPANY
Dept. "Z"

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LONDON, ONTARIO, APRIL 17, 1919.

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EDITORIAL.

Kill the smut germs before sowing the seed.

"Under protection, where will the revenue come from?"

Is that broken implement repaired and ready for the field? The season for action is here.

Railroads are being peddled at the present time, and a few of them might be picked up as Christmas presents for the boys.

Cast your influence on the side for better rural schools. This is a live issue now, and one that concerns you as a Canadian citizen.

It is that extra pound or two of butter per cow each week that gives the profit, provided it is the outcome of better care and more systematic feeding.

The officials connected with the co-operative grading and marketing of wool are optimistic in regard to prices. Don't back-slide in the care of the flock and its product.

In the Farm Department of this issue is an article which discusses crop rotation. The crop varieties and kinds of fertilizers may be adjusted to suit conditions, but the principles are sane and worthy of consideration.

The "oleo" manufacturers are taking advantage of the high price of butter to boost their product, and are making a house to house canvas, urging consumers to use oleomargarine. What is the Dairy Council doing?

A scheme has been launched by the Minister of Labor to democratize industry and give labor its proper position in the world of production. Perhaps, after all other grievances are settled agriculture may receive some attention.

Spring has been rather tantalizing so far. The weather has been mild enough to incubate the spring-fever germs, but the condition of the land has not been such that one could get on it with drill and harrows and thus find relief.

Don't waste time raising weak chickens with poor constitutions and lacking in vigor. Select eggs only from vigorous productive birds. The poultry industry is going to make rapid strides, and the strong flocks will be the best earners.

The control system is being perpetuated for what reason? The fuel control is still in existence, and just about as much use as ever. They are now worrying dealers for reports on last winter's transactions, when it is next winter that most people are thinking about.

The Manufacturers' Association and the Canadian Reconstruction Association are conducting wonderfully thorough, yet inconsistent and contradictory campaigns against tariff reduction. One says: "Tariff for Revenue," and the other urges, "Buy Made in Canada Goods."

In many sections calves are being sacrificed on account of the high price of milk and butter-fat. This is short-sighted policy, for we shall be in the dairy business for a long time yet and milk cows will be required. Good calves can be raised on skim-milk calf feeds and other substitutes. Save the good calves with which to replenish the herd, and be strong in the business when the less provident are looking for milk cows which cannot be found.

The Reason Why.

It has been pointed out time and again that the population in the cities is continually increasing, and out of all proportion to the population on the land. Year by year the population in our cities is increasing faster than it is in the country. Yet the world is being fed. If there was to be any great world-wide move from the cities to the farms, the production of foodstuffs would increase to such an extent that not only would there be large surpluses, but prices of foodstuffs would go down and farming would be still less profitable.

The reason that the increase in population in our cities is greater than in the country, is that the production of foodstuffs per man through the use of machinery is constantly increasing, coupled with the fact that under our present economic conditions farming is not as profitable as city trades and the occupations of middlemen and merchants. Until such time as there is a readjustment of our economic conditions that will give the producer on the land a larger share of the wealth he creates, and which will enable him to improve his social conditions, there will be no back-to-the-land movement that will be in any way offset the back to the city rush.

All this indicates that we of the land, who intend to stay on the land, have a right to use every power at our disposal to adjust conditions that will give to the farmer a higher income from his farm, an income that will give him the same comforts of life as are available to those living in our cities.

The Farm Survey Work.

One of the most important lines of work being conducted by the Ontario Department of Agriculture is that known as "Farm Surveys". The initial step was taken in Caledon Township, Peel County, but certain sections of Oxford County have been canvassed to give some reliable information concerning agriculture in dairy districts, and now a block of Middlesex County, where mixed farming is practiced and grass land abounds, is being studied. This latter investigation will reveal the truth in regard to beef cattle farming, and show what practices should be endorsed and what methods should be condemned in that part of the Province. Dairymen learned something from the Oxford County survey. Farmers generally will profit by the results compiled in Middlesex, but perhaps more significant still is the fact that Ontario's agricultural ledger is being thrown wide open exposing the profit and losses to the public gaze. In these times of so much acrimonious discussion, when epithets are being hurled at the farmer and he is accused of profiteering, is there another industry that will open its ledger wide and permit the Government to publish its balance sheet? Is there another industry that will volunteer to have its methods investigated, and permit the dear public to know just how it stands in its relation to them? When all industries are prepared to lay their cards on the table and request a close investigation then people will know the truth, but until such is done this twaddle about farmers getting wealthy will not be listened to by sensible people, especially when Government reports are available to anyone who desires to get at the facts.

There is just a possibility, too, that these farm surveys will answer that question now uppermost in the minds of the manufacturers, viz., "Under free trade, where will the revenue come from?" We understand that already certain interests are beginning to feel that the publication of any further agricultural truths will be damaging to their cause, and are now bestirring themselves to have the soft pedal put on the farm survey operations.

Instead of curtailing this phase of the Department's work, it should be extended, now that farmers understand its usefulness and are willing to supply the

required information. A logical step in advance would be the creation of a new department at the Ontario Agricultural College where students would have the opportunity of studying Farm Management and co-ordinating the teachings of the various departments. Such a department would be a good thing for the College, it would be a good thing for the students, and the instruction given, based naturally on the results of farm surveys, would help all practical farmers to better understand the relation of one branch of the farming business to another so the proper course to pursue would be plainly marked out for all districts. Above all the facts ought to be compiled and published, and a greater effort should be made to have these agricultural truths presented to urban people. When the majority know the facts then there will be a better understanding between all classes.

Consideration For Rural Schools.

The Government of Ontario has done well to admit, in the language of larger appropriations, that rural schools are deserving of increased attention. This recognition on the part of the Educational Department seems to synchronize with a spirit of dissatisfaction in the country, and a realization that rural schools as now constituted are inadequate and out of date. The \$250,000 appropriated to advance the rural school is, we understand, to be divided between dental and medical inspection, higher salaries to teachers and, no doubt, the experiment with consolidated schools. We consider this an official admission that all is not right with the country school, and that something should be done, which is a long step for the Department of Education to take at one time.

Dental and medical inspection in the schools has been tried in some rural sections with positive results. One could hardly say gratifying results, because of the large number of pupils found to be suffering from defective hearing, defective eyesight, adenoids, bad tonsils and other imperfections which retard them in their educational development. There are many instances on record where backward children have been punished and otherwise maltreated for their inability to progress at school, but when given a medical inspection the backwardness was found to be caused by some physical defect easily remedied. Slight operations, spectacles and other little attentions have converted so-called backward pupils into brilliant scholars. We are aware of a prejudice against medical inspection in some parts of the country, but it is not well-founded. School nurses are employed constantly in many of the towns and cities, and the parents do not resent having imperfections in their children (which are by no means uncommon) pointed out and remedied. All children are entitled to a fair chance, and the scheme of medical and dental inspection cannot be endorsed and applied any too soon.

For years "The Farmer's Advocate" has been recommending consolidated schools. We have pointed out what has been done in certain provinces and states in this direction, and to us there appears no other solution to the rural-school problem but consolidated or community schools of some kind. We are of the opinion that the Department of Education should lead in this matter, and show the people of this province what advantages there are if we will accept them. Consolidated schools should be given a thorough trial, and if found superior to the common, ungraded country school, then no stone should be left unturned until they become a part of our educational system.

We fear the Department will follow the line of least resistance, and be content to raise the salaries of teachers and consider they have done well. Insufficient salaries have been the cause of many leaving the profession, and we would not care to discourage any move that will lead to more remuneration for good teachers. How-

The Farmer's Advocate and Home Magazine.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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ever, this is not solving the problem; it is only shelving it. The appropriation of large sums of money for the purpose of creating new positions and raising salaries only aggravates an unhealthy condition. Agriculture was calling for attention, and \$1,000,000 per year for ten years was appropriated by the Dominion Government under the Agricultural Instruction Act. This has not and will not remedy the ills from which agriculture is suffering. It applied a salve when an operation was necessary. This has nothing to do with the rural school, but the two cases under consideration are analogous.

What is good in the Department's scheme for improvement should be given staunch support, but they should be urged to go on and give us better schools, with curricula more suited for country children.

Making a Success of One's Life Work

BY ALLAN MCDIARMID.

A certain friend of mine has been all his life-time wanting to get on to a farm and make his living there, instead of being tied down to the job he is at. Force of circumstances made a school-teacher of him, and kept him at it ever since. There isn't much question but that he would have made a successful farmer, as he has plenty of ambition, a good head and a strong constitution. He doesn't like school teaching, but has made up his mind at last that it has to be his life-work and so is putting all his energy into it and has every reason to think that what he is doing is of value to his pupils, aside from whatever it may be worth to himself.

A contrast to this case is that of another man I have known for years. He has been on a farm practically all his life and I don't think that, if he expressed his mind about it, he would say that he ever took much pleasure in his work. He has a talent for the working out of problems of all kinds and is strong on theory, but should have a partner in the business with him who would put these theories into practice. He would have made a first-class college professor or a demonstrator on some of our Experimental Farms. Like my friend the school teacher, he's in the wrong line of work to bring him the greatest amount of happiness. But in spite of his discontent he has stuck to the job and has made a good living for himself and his family. Some people called him a "misfit". Maybe he is.

I have just heard the story of another man who had a life experience that reminded me of my two friends mentioned above. He told it to me himself, and although it isn't very flattering to him it is probably all true.

He said that he lived half a century before he found the kind of work he was fitted for. As a boy he worked in a wollen mill, but this was so little to his taste that he took the first chance to get himself fired. It wasn't long before he got work in a hardware store. But they put him at carrying kegs of nails up-stairs and he came to the conclusion that they were trying to break his spirit, so he quit that.

Then he tried farming. But the long hours and the hot sun were a combination that he didn't think favored his health, so he bought a valise and filled it up with photograph albums and went peddling. However, as he couldn't sell any of them he was forced to go out of business and find other employment. This turned out to be a job in a printing office. He didn't have to make any special effort to get himself kicked out of here, and after experimenting with several other business concerns of the same town he concluded to return to the country as a book-agent.

But the farmers didn't seem to be impressed with the importance of acquiring the knowledge to be found in his "History of the Revolution" so he rented a small farm and started in to milk cows and feed hogs. It wasn't long before he discovered that, to make any profit out of them, you must milk the cows at least twice a day, to say nothing of feeding and otherwise looking after them. This fact, along with others in connection with the hog-raising, caused him to lose interest in the life of the agriculturist and as soon as he could dispose of his live stock he took the fastest train back to the city.

Again he made the rounds and finally landed in a newspaper office. But this time the unexpected happened. He stayed on. He claimed to have found the work for which he was adapted. For the first time in his life he was contented and found himself making money. And it ended, in the course of time, by his getting control of the whole enterprise and in making something of a name for himself as well as for the publications that he sent out through the country that had so long refused to provide him a living. Now if one didn't know something of the ins and outs of this man's life they might suppose that there was only the one kind of work that he could have made a success of. They might come to the conclusion that anyone that didn't happen to hit the work that he was peculiarly fitted for would be a failure at everything else. It's a mistaken idea. We were given brains and a certain amount of ability to enable us to adapt ourselves to circumstances. We can make ourselves fit the job that comes to us, if we have determination enough to do it. The trouble with our friend that we have been telling about, was that, for the greater part of his life, he had been what he himself termed a "boozier". For some reason, best known to himself, he quit drinking at the time he got employment in the newspaper office. His change of fortune began with his change of habits. The energy he had wasted on his weekly sprees was now given to his daily work, with the result that could easily have been foretold. Drunkenness and laziness go together and they are too much of a handicap to give any man a chance to win out in the race in which we are all supposed to enter.

What I claim is that, if he had changed his ways sooner, he might have made a success of any one of the many occupations in which he had been engaged with such poor results; not even excepting the book agency. It's in the man, not in the job. The experience of that school teacher and the farmer I mentioned, are proof enough of this for me. A man may not be so happy at one kind of work as he would be at another that he thinks he is better adapted for, but if he is the right kind of a sport he will turn in and do the best he can with it. Happiness isn't everything. It will come some day but it isn't necessary when it comes to making our time here of value to the world, as well as to ourselves. In fact some maintain that the person who has experienced the most trouble and misery of various kinds in this life, is the one that has got the most out of it. I came across something lately that brings out this idea. It is a short poem by one Samuel Daniel, who must have lived some hundred years of age, judging by the style of his verse, to say nothing of the spelling. But the sentiment he gives expression to is the important point and I can't help feeling that there is a good deal of truth in it, although it runs contrary to the general idea. Here it is:

"Not to be unhappy is unhappiness
And misery not t' have known misery;
For the best way unto discretion is
The way that leads us by adversity;
And men are better shewed what is amisse
By th' expert finger of calamitie,
Than they can be with all that fortune brings,
Who never shews them the true face of things."

If that is true it doesn't matter very much, after all, if things don't always go to our liking, or if we find ourselves tied to a job that seems to afford us less "happiness" than "misery". Perhaps it was a matter of some importance that we should have learned a good many of the things that we did, after we had undertaken the contract that has turned out to be our life-work. Again we say, it doesn't matter very much what that work is, provided it does not affect our self-respect. We'll get out of it what we put into it, whether it happens to be running a State University or digging a ditch in our back field.

Nature's Diary.

A. B. KLUGH, M.A.

The Groundhog or Woodchuck.

The Groundhog, otherwise known as the Woodchuck, has a wide range in Canada, occurring from the Atlantic to the Rockies and as far north as Labrador, Hudson Bay and Great Slave Lake. In the Rockies and British Columbia it is replaced by an allied species known as the Hoary Marmot, Whistler, or Siffleur.

The Groundhog is an animal of the open forests, and its chosen habitation at the present time is just at the margin of a wood or copse where it joins a meadow. It rarely wanders further than a hundred yards from its burrow, except when it is seeking a new location for a home, which it apparently does every spring.

Its burrows vary greatly in their complexity. Some have but one entrance and a total length of but six feet. They usually have two entrances and several galleries with chambers at the end of each gallery, in which cases the total length of the galleries may be over forty-seven feet. Most of the entrances have a mound of earth in front of them, but some have not, and in these latter cases the burrow has been excavated from below upwards. The Groundhog is the original inventor of the "dry earth closet," as at the end of its main gallery it has a chamber in which it buries its excrement.

The Groundhog when pursued in its burrow frequently plugs the burrow behind it.

The young are born in a chamber in the burrow about the end of April. They number from two to eight, but usually there are four or five. They are blind for about a month, and do not come out of the burrow until the middle of June. The male seems to leave the burrow prior to the birth of the babies, and to return about the time they are old enough to come out to feed. An observer states that on July 6, at five o'clock in the morning, he saw a family consisting of the parents and eight young out feeding. The mother came out first and called; the father came out, then went back and brought out all the young ones. By the end of August the young are nearly full-grown, and they go off by themselves to dig burrows of their own.

During September the Groundhog is busy storing up a supply of fat to last it through the winter and early spring, and about the last of the month it retires for the season. It passes gradually into the dormant condition known as hibernation, a state which is not like an ordinary sleep, but is a state midway between sleep and death, for during hibernation all the bodily processes are reduced to a minimum. The rate of respiration is far slower than in ordinary sleep, as in hibernation the animal breathes only once every five to nine minutes. The circulation is so reduced that the blood scarcely moves through the arteries and veins, and the heart-beat is so faint as to be almost imperceptible.

The Groundhog awakes quite early in the spring, often before the snow has gone and certainly before its supply of green food is ready, and goes on quite extended trips, as is revealed by its tracks on the snow. The purpose of these trips has not been satisfactorily determined, though it has been surmised that this is the mating season.

This species can, and occasionally does, climb trees. Merriam says: "Woodchucks, when molested, and particularly during their youthful days, often climb up ten or twelve feet in shrubbery and young trees that abound in low branches, and not infrequently scramble up the trunks of large trees, which have partially fallen, or slant sufficiently to insure them against slipping. Occasionally, especially when hard pressed by a fast-approaching enemy, they ascend large, erect trees whose lowest branches are some distance from the ground. But, in order to do this, they must take advantage of the impetus of the rush, for they cannot start slowly upon the trunk of an upright tree and climb more than a few feet without falling. Neither can they stop and go on again before reaching a branch or other resting place."

If caught at some distance from their burrows adult Groundhogs, and more particularly young ones, will turn and put up a fight rather than run away. In such cases they will charge at you again and again, snapping their teeth, growling and biting your boots.

The Groundhog's chosen fare is clover, but in the absence of this it will eat grass, grain or garden crops such as lettuce. They feed mostly in the early morning and in the evening just before sundown.

During the day they frequently lie out in front of their burrows in the sun and sometimes go very fast asleep. Upon one occasion I saw one thus sleeping and approaching quite close and keeping hidden behind a little hillock I dropped a pebble on him. He started, looked all round, and seeing nothing unusual settled himself to sleep again. Another pebble dropped on him was evidently too much of an annoyance, as he descended into his burrow.

When Groundhogs become over-numerous they frequently become a nuisance, not only by their destruction of crops but by the numerous holes they make which endanger the limbs of horses and cattle. The surest way of eliminating them is to pour some carbon bisulphide down their burrows and fill up the entrance. The heavy gas from this liquid will descend to the end of the burrow, and will send them into a sleep from which there is no awakening.

Use the harrows freely on the full-plowed corn land and those fields that will be seeded last.

Care of

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THE HORSE.

Care of Mare and Foal When the Dam Has to Work.

A brood mare that is not required to perform the functions of a work-horse during the nursing season should, other things being equal, rear a better foal than the one that has to work. It is claimed that it is not profitable to keep a mare for the sole purposes of raising foals; and, unless she be a high-class mare there is doubtless considerable force in the assertion. Be that as it may, the fact remains that many farmers who breed one or more mares depend upon them for the performance of a great portion of the ordinary farm work, hence the discussion of our ideas as to the better manner of treating such mares and foals is the object of this article.

Some claim that a mare should have at least a few days' rest before parturition, but it often occurs that she shows no definite symptoms to indicate that parturition will take place in a few days, and is worked right along until she shows symptoms of immediate parturition. We do not think it unwise to ask her to perform light labor up to this time, but of course a mare during the last few weeks of gestation should not be asked to perform very heavy labor, but is much better performing light work than spending her time in idleness, unless it be at a season when she can spend her time on pasture, or taking regular exercise in some way. Under any condition a mare should be allowed at least 10 days to 2 weeks idleness after the birth of the foal. The nursing of a foal is probably as great a strain on the physical abilities of a mare as the performance of farm work is upon her non-breeding sister. Hence, we can readily understand that when the double functions are exercised the mare should be given extra care and an extra supply of feed of first-class quality. She should be given a liberal supply of easily-digested feed that will produce bone and muscle, and at the same time stimulate the secretion of milk. Rolled oats and bran along with good hay, or grass when in season, has proved to be the best ration for these purposes.

Provided she is doing regular work her allowance of grain should be greater than for an animal that is not breeding. When practicable it is good practice to feed grain four times daily, rather than increase the amount given each meal. The colt can, and should be taught to eat grain when quite young. The dam will, in most cases, allow her foal to eat out of her box, but it is better to feed it out of a separate box that is arranged at the proper height. It is better to have the dam tied so that she cannot rob the foal after she has consumed her own ration. Chopped oats is probably the better feed for the quite young foal, but rolled oats give good results; and of either it is, in most cases, safe to allow it all it will eat.

When the mare is at work it is generally considered better to have the foal shut up in the stable in a comfortable box stall with the door so high that he will not attempt to jump out, and with no mangers, feed boxes, etc., into which he can rear or get into trouble in any way. If he be allowed to follow the dam he will take more exercise than is desirable, consequently will not thrive so well, will be a greater or less nuisance to the driver, and there will be danger of him becoming tangled in the traces or the implement to which the dam is hitched, thereby probably injuring himself. The box in which he is kept should be such that there is no danger of him getting into trouble in his attempts to follow his dam. The walls and doors should be so high that he cannot get his fore feet over them, and there should be no openings through which he can get his head. After a few days he will remain quite contented in the stall, and if supplied with a little chop and grass will not suffer from hunger between meals. In fly time the stall should be partially darkened. If the mare be a good milker, it is wise, for a time after this kind of management is adopted, for the driver to milk her a little occasionally to ease the congestion of the mammary gland, but it will not be necessary to continue this long, as the lacteal apparatus soon forms the habit of adapting itself to existing conditions. If the weather be cool, and the mare performing only ordinary work and not perspiring freely when taken to the stable, it is quite safe to allow the colt to nurse at once, but should the weather be warm, or the mare performing very hard work, or from any cause be quite warm, it is dangerous to allow the colt to nurse at once. In cases of this kind the milk becomes over-heated and is very liable to cause diarrhoea in the young animal. When the milk is in this state the attendant should draw little off and allow a few minutes, say 15 to 20, to

elapse before turning her into the stall with her foal. After a time there will not be so much danger in allowing the foal to take milk under such circumstances, as he will be getting stronger and his digestive organs will have gradually acquired the ability to perform their functions under such conditions. At the same time reasonable precautions must be continued in order to avoid digestive derangements.

W.H.P.

In Defence of the Hackney.

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue you published a photograph of a heavy harness horse, (a Hackney), with the statement that this is "A type of horse which the auto is displacing." Allow me to correct this very erroneous and unwarranted opinion. In a recent issue of the Westminster Gazette appears the following: "It is interesting to know that the motor car has not driven the horse out, for transport purposes. Plainly the authorities believe it will hold its own in civilian work, but if it did not, it would be necessary to give state encouragement to horse breeding." The Breeder's Gazette, The Scottish Farmer, The Farmer and Stockbreeder and other leading papers, devoted to live stock breeding are all of the same opinion. The Prince of Wales, gave, at the recent Annual Hackney Show, held in Newmarket, a Cup, for the best horse suitable to get remounts and artillery horses, which was won by Mousons Lovat Shales by Walpole Shales. A reference to the Annual Report of the National Live Stock Records, would have shown you that the Hackney was more than holding his own and had a better year than either of the other light breeds. All the breeds suffered more or less during the past trying times. There have been more Hackney stallions change hands this year so far than in a number of years. There is a good reason for this; the breed is so well established and known for its superb conformation,



Rising Star.

First two-year-old Clydesdale stallion, Glasgow, 1919.

good disposition, action and freedom from unsoundness. There is a waiting market for superior heavy harness horses, 15.1 hands, over and under; also for those that do not come up to this high standard, which are being sought for by the express companies and light delivery companies in large towns and cities.

There is no doubt that history is repeating itself. When the stage coach was taken off the road for commercial purposes, I have no doubt just such pessimistic remarks were made by those who had little knowledge of the subject and less interest. The Hackney is the real general utility horse, and with the revival of horse shows you will see them again champions in the carriage, heavy express, light delivery, saddle and jumper classes, and the champion high jumper of the world.

H. M. ROBINSON.

Work Horses Command High Figures in Britain.

Since the signing of the Armistice up to the middle of March 62,520 horses have been sold in the United Kingdom for a total sum of £2,075,858, or an average of £33 4s. Prices have steadily risen since selling commenced, probably because only sound, hard and useful working horses have been brought from France. Heavy draft horses for agriculture and heavy haulage purposes in cities and towns have been and still are in great demand. Their average price ranges around £55, but extra good ones bring over £100. The record is 250 guineas for an American Percheron-bred gelding sold at Tattersalls. This information was forwarded by the Deputy Director of Remounts, who also says that the demand for high-class riding horses and polo ponies is far from satisfied and may remain so after the demobilization is completed.

We understand that it is not now possible to ship horses to Britain on account of transportation difficulties. However, those in authority are looking for an early remedy to this situation.

The Calgary Horse Show.

Beginning on March 25 the Calgary Horse Show held sway for three days and a good exhibition was staged. The Clydesdale exhibitors were forward in numbers with their horses in good fit particularly the older ones. A dozen horses came out in the aged-stallion class. It would be misleading to say that better classes have not been seen at Calgary, but that fact does not prohibit the statement that some right-good horses were out in the aged class this year. Baron Rozelle, shown by McKay Bros., Carmangay, finally won. He is a great big worthy horse, with magnificent character and scale, and he moves nicely on a set of sound, likeable feet and legs. S. Haggerty, Belle Plains, Sask., ran him a close race with Magic Stamp, a slashing horse of most attractive style with a little more scale, this good sire would have headed this class. Scottish Crown came next in order. He was shown by Percy Harradence, Shepard, and is a likeable horse of good balance and underpinning. He beat Jno. Laing's Scotland Major, a sturdy, clean limbed horse.

The two-year-olds were a good class. Thirteen horses were entered, and scarcely a tail-ender could be pointed out in the aggregation. Andrew Dollar, High River, won with comparative ease on Scotland's Cross, by Hamlet. In the championship duel the honors went to Baron Rozelle and reserve to Scotland's Cross. The mare championship was won by A. Webster, Lacombe, on Nettie of Penkiln, which won the aged-mare class.

Unlike the Clydesdale classes, the younger Percherons drew the plaudits of the ringside onlookers. The two-year-old stallion class in particular, in which no less than twenty-five horses were entered was an exciting one and featured several remarkably good colts. The aged stallions were just a fair lot. Contact, shown by Vanstone & Rogers, North Battleford, headed the class. He is a big handsome fellow but could travel a bit closer. Layzell & Parr captured second honors with Casey. He is a big horse, rangier in type than the one that stood above him. R. F. Dygert, Edmonton, had a good horse at the head of the three-year-olds in Star. Layzell and Parr of Calgary, were second with Goldet and Vanstone and Rogers were third with Pickadill. The two-year-old class was the outstanding feature of the Percheron exhibit. Six horses out of the twenty-five shown were exceptionally good ones, and about ten more were worthy of close scrutiny. Finally Jno. Grant's Private stood ahead. He is a handsome horse in nearly every particular, but his strong point was his great scale and style. Next to him stood Geo. Lane's Ontario. This horse is thick, lowset, and balanced, and while not as big as the horse placed above him, he is fully better underneath, with a stronger bone and a little wider foot.

The championship in the stallion classes was won by Private, shown by Grant, reserve going to Ontario, shown by Lane.

The champion female was Crescent, shown by Layzell & Parr.

Our Scottish Letter.

BY SCOTLAND YET.

It is three weeks to-day since I last wrote. In the interval we have had our great draft horse carnival, and should Clydesdales almost monopolize this letter I hope for once that this may not be displeasing to many readers. In the first week of the month we had the Scottish Stallion Show, the annual meeting of the Clydesdale Horse Society, a visit from many overseas men serving in the forces and interested in horses, with provision for their education and entertainment, and (although it is always invidious for one to refer to himself) an almost unique presentation to the gentleman who has for fully forty-one years been associated with the Clydesdale Horse Society, its Secretary for thirty-eight years, and Editor and Manager of The Scottish Farmer for fully twenty-six years. I would like to dismiss this last affair, here and now, by thanking most sincerely all who contributed to that unique recognition of secretarial and journalistic work mainly by one's "ain folk." Anything like the form which the testimonial assumed was never once dreamed of by me. The man would be cold indeed who did not feel touched by a tribute from over four thousand donors in all parts of the world, which took the form of silver plate and a cheque for £2,000 (\$10,000). To all Canadian friends and contributors I say most sincerely, "Thank you, from the bottom of my heart!"

The Glasgow Stallion Show.

The Glasgow Stallion Show was the fifty-ninth of a long series, and of these fifty-nine I have been present without a break at forty-one. The first Stallion Show at which I was present was held in the Glasgow cattle market on the third Tuesday of February, 1879. How many aged horses may have been shown I do not remember, but the number of three-year-olds was fully one hundred and twenty. There were only the two classes, and the winner in the aged class was Mr. Riddell's Bonnie Breastknot 108, his stiffest opponent being Peter Crawford's Strathclyde 1538. I cannot profess to have any definite recollection of the appearance of the former, but the latter I saw not at the Show only or chiefly so as to remember him but at his owner's stables. He was a clumsy, "wooden" sort of horse,

s Diary.

IGH, M.A.

or Woodchuck.

wise known as the Wood-Canada, occurring from the d as far north as Labrador, ave Lake. In the Rockies replaced by an allied species t. Whistler, or Siffleur.

imal of the open forests, he present time is just at se where it joins a meadow. an a hundred yards from y has been excavated from is seeking a new location ntly does every spring.

in their complexity. Some a total length of but six a entrances and several e end of each gallery, in of the galleries may be over e entrances have a mound ut some have not, and in y has been excavated from ndhog is the original in- oset," as at the end of its ber in which it buries its

rsued in its burrow fre- ind it.

a chamber in the burrow ey number from two to four or five. They are d do not come out of the une. The male seems to e birth of the babies, and y are old enough to come tes that on July 6, at five aw a family consisting of ut feeding. The mother e father came out, then all the young ones. By are nearly full-grown, and dig burrows of their own. oundhog is busy storing through the winter and st of the month it retires adually into the dormant on, a state which is not a state midway between ibernation all the bodily minimum. The rate of e ordinary sleep, as in es only once every five ion is so reduced that the e arteries and veins, faint as to be almost

uite early in the spring, e and certainly before its d goes on quite extended acks on the snow. The t been satisfactorily de- surmised that this is the

onally does, climb trees, , when molested, and ful days, often climb up y and young trees that ot infrequently scramble ch have partially fallen, them against slipping. ard pressed by a fast- end large, erect trees me distance from the this, they must take e rush, for they cannot of an upright tree and outh falling. Neither before reaching a branch

ce from their burrows particularly young ones, her than run away. In you again and again, and biting your boots. re is clover, but in the , grain or garden crops ly in the early morning ndown.

ntly lie out in front of ometimes go very fast saw one thus sleeping eeping hidden behind e on him. He started, othing unusual settled er pebble dropped on an annoyance, as he

er-numerous they fre- ly by their destruction oles they make which d cattle. The surest pour some carbon bi- ll fill up the entrance. l will descend to the hem into a sleep from

full-plowed corn land d last.

of a type which would not be looked at to-day, although in the previous year, 1878, he was considered good enough to beat the famous Druid 1120, which won first at the H. & A. S. Dumfries in 1878, and at the R. A. S. E. at Kilburn in 1879. I am not sure that even Druid himself would count for much to-day in spite of the fact that he was of great depth and weight. He was rather round in bone, and lacking in quality of limbs. Still we could do with more of his type in so far as formation of top and quarters is concerned. In the three-year-old class in 1879 the winner was James Johnston's Roderick Dhu, a dark brown colt which had won first at the H. & A. S. Dumfries in the previous year. His breeding was never disclosed to Mr. Johnston, who bought him at the Merryton sale in April, 1878. His dam was a mare named Boosie which Lawrence Drew brought out of Derbyshire when in foal with what became Roderick Dhu. In after years Boosie, in the hands of the late Peter Brown, Craighton, Bishopton, had a colt foal by Sanquhar 2393. This colt foal became known as The King, and was awarded the Glasgow prize as a three-year-old. Roderick Dhu had a stiff fight for first place at the 1879 show with Mr. Riddell's Rosebery, a light bay colt bred by Mr. Drew, and got by Prince of Wales 673, out of an English mare named Ruby. Rosebery was a nice quality horse with good feet and legs, and I rather think that according to the standards of to-day the relative merits of Roderick Dhu and Rosebery would not have been arguable. However, that is idle speculation. Roderick Dhu won but he never travelled the district, nor did Bonnie Breastknot. The latter died at the beginning of the season, and the former was exported to Australia by a noted dealer of those far-off days called John Trestrail.

In 1879 and up to 1892 the Glasgow premiums of £100 were the blue ribands of the Clydesdale world. In 1892 the first competition for the Cawdor Cup took place, and increasingly since that time the Cawdor Cup has been the crowning trophy, except when the winner of the Cup is defeated by the winner of the Brydon Challenge Shield, competition for which is restricted to horses three years old and upwards. This is what happened this year. The first prize aged horse was Falconer L. Wallace's seven-year-old Dunure Refiner 17872, which was bought at the Dunure Mains dispersion on January 14 for 3,500 guineas. He won the Cawdor Cup when a two-year-old in 1914, and was then the champion of the Show. This year the winner of the Cawdor Cup was George A. Ferguson's four-year-old Ardentale 18993, which stood second in his class to Dunure Refiner. When, therefore, the horses came against one another for the Brydon Shield the issue had already been decided. Dunure Refiner is a beautifully balanced horse, very true to Clydesdale type. He has sweet-quality limbs and close action. His top and quarters are well formed and he has deep ribs. Ardentale, on the other hand, is of the more upstanding order, is not so deep in rib, and does not give quite the same impression of power in the fore limbs as Dunure Refiner. Of course, he is three years younger and if he thickens and grows down in rib he will be a much heavier horse than his successful rival on this occasion. Dunure Refiner is by Dunure Footprint, and Ardentale is by Bonnie Buchlyvie, both sires being by Baron of Buchlyvie 11263. The third-prize aged horse was James Gray's Botha 19026, of the same age as Ardentale but more after the type of Dunure Refiner. He has been a remarkable winner and promises well as a sire. His own sire was Baron of Buchlyvie. An extraordinarily good type of draft horse was fourth in Hiawatha Again 18765, a six-year-old son of the renowned Hiawatha 10067, and one of the best horses alive to-day. He is owned by Mrs. Kinloch, Ardoch Farm, Cardross, and is highly popular with horse-breeding societies, being hired three seasons ahead. John Samson's Drumcross Radiant 18323 which won both Cawdor Cup and Brydon Shield in 1915 was fifth. He was got by Hiawatha's son, Apukwa 14567 and is a beautifully topped horse with exceptionally good hind action. The sixth horse was William Kerr's Drexel 16548, by Revelanta 11876, and the highest-priced horse at the Banks dispersion in March 1918. The seventh, Mr. Pollock's Royal Fern 18078, a notable son of Bonnie Buchlyvie with the best of feet and legs. We have seldom seen a finer class of age horses. In quality, combined with weight and size, the seven named would be very hard to beat.

The leading three-year-old was Dunure Obligation 19426, a black colt by Dunure Footprint 15203, which has the great record of having been first at this Stallion Show as a yearling, two-year-old and three-year-old. He is now owned by John Johnston, Carbrook Mains, Larbert, and was reserve for the Cawdor Cup. Second to him stood James Gray's great colt, Birkenwood 19350, of his own breeding, and got by Dunure Birkenwood 18327, out of the beautiful prize mare Molly of Birkenwood 41028, by Bonnie Buchlyvie 14032. She was first prize brood mare at the R. A. S. E. Manchester in 1916, with Birkenwood a foal at foot. This colt has been hired for the ensuing season to the Donside district of Aberdeenshire. His terms are £8 at service and £10 additional for each mare proving in foal. That means that he can win about £500 in his first season. He is also hired for 1920 to Turriff district of Aberdeenshire. The third prize colt was George Bean's Royal Footprint 19539, a beautiful colt with the best of feet and legs, a fine short back and good long quarters. He was first in the following week at Aberdeen. Two extraordinarily good colts were first and second in the two-year-old class at Glasgow. These were Thomas Clark's Rising Star 19836, from Pitlandie, Perth and George A. Ferguson's black colt, Passchendale 19815, from Turradale, Elgin. There was a tie between these colts as there had been a year earlier when they first met at Aberdeen. The same question arises between

them as between Dunure Refiner and Ardentale. Rising Star is a thick, deep-ribbed colt, with good top, and very good feet and legs. Passchendale is more of the upstanding, gay type. He was got by Phillipine 18044, for which Mr. Ferguson paid 2,400 guineas at the Seaham Harbor dispersion, out of Celia 43282, by Dunure Footprint 15203, and Rising Star is by Dunure Footprint 15203, and Rising Star is by Dunure Footprint 15203, an H. & A. S. first-prize colt in his time. Robert Graham, Kairnflatt, Kelso, was third, with Border Ensign 19631, a "slashing" big colt by Dunure Footprint.

In a fine class of colts foaled in 1918, colts by Apukwa 14567 were first and fourth, and colts by Dunure Footprint were second and third. The third has been named Dunmore Refiner 19897 and has been exported to Boston, Mass., by Mr. Grant. His price is quoted at £3,000. The fourth was sold in Aberdeen show-yard last week for £1,500. The latter price I can testify to as I was present when it was being paid. The colt which is named Alacrity was exhibited by James Gray, Crawfordstone, Kippen Station, and his buyer was James Kilpatrick, Craigie Mains, Kilmarnock, the new President of the Clydesdale Horse Society.

The Aberdeen Show.

The Aberdeen Show was held a week later. Its chief feature was the remarkable display of young stock, especially yearling fillies. The senior championship went to G. S. Ferguson's Passchendale, which had won in the two-year-old class. The reserve was Mr. Gray's Botha, which stood second in the aged class. Mr. Ferguson's Dunure Kaleidoscope 18335 which he purchased at the Dunure Mains dispersion for 4,100 guineas was first in the aged class, but did not compete for the championship, on account of the rule that a horse must be at least six months in an owner's possession. George Bean's Royal Footprint 19539 was the first prize three-year-old. The junior championship which is confined to the winners in the two classes of yearling and two-year-old fillies, and the class of yearling colts, was won by Stephen Mitchell's first-prize yearling filly, got by Apukwa, out of Boquhan Jean 41590, by Dunure Footprint. The reserve was James Gray's first-prize two-year-old filly, Senga, own sister to his first-prize yearling colt, Risque, which occupied that place both at Glasgow and at Aberdeen, and uterine sister to Birkenwood, already referred to. The Aberdeen Spring Show is now one of the best in the country for young stock, and several of the largest Clydesdale studs are now located in Aberdeen and Elgin. Recently George A. Ferguson paraded fifty stallions to a

managed milk-record herds were tabulated. The average for the fourteen herds over a normal lactation period was 533 gallons per cow. There is urgent need to eliminate the bad sire—not in the dairy breeds alone, but in all breeds. In Great Britain we have too great a difference between the high merit of our pedigree herds and the average merit of the commercial stock of the country. Recently Alfred Mansell, Shrewsbury, read a paper to the Farmers' Club, London, in which he advocated the elimination of the inferior or bad sire. He did not, however, define the term, while he condemned the animal. So far as horses are concerned the worst kind of sire is the animal that is almost, if not altogether, sterile. The Clydesdale Horse Society means to take steps to prevent the exportation of such. Possibly the end in view can hardly be attained without the co-operation of breed societies overseas.

Some Long-Lived Clydesdales.

In connection with the presence of overseas men at the recent Stallion Show, a lecture was delivered by the writer of this letter in one of the halls in Glasgow. It was well attended by the men for whom it was designed and many others. Over sixty photos were shown upon the screen, of famous horses and mares of the breed, and it is noteworthy that at the Show there was exhibited the Clydesdale stallion, Montrave Mac 9958, foaled on April 23, 1893, and therefore almost twenty-six years of age. He was looking remarkably fresh and fit, with clean, flat bones, and he went round the ring like a three-year-old. His sire was the famous Macgregor 1487, which lived to be over twenty-two years old, and his dam was Montrave Maud 11786, whose sire Prince of Wales 673, died when he had completed his season in 1888, that is when he was rising twenty-three years old, and her dam, Moss Rose 6203, died when she was twenty-eight years old.

LIVE STOCK.

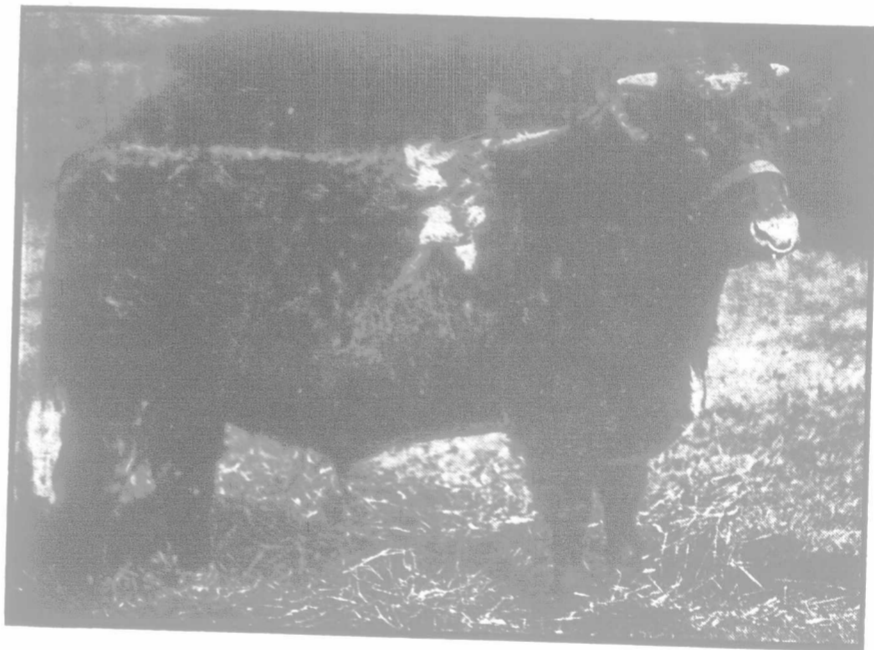
Care of the Flock Header Throughout the Season.

EDITOR "THE FARMER'S ADVOCATE":

The use of a good pure-bred ram in the flock is essential to obtain the best results. The care of the ram during breeding season and after is also of due importance to insure the best results from mating and to prolong his usefulness. The breeder usually purchases the ram early in the season that he may get a good selection but does not take delivery till the breeding season. He is then turned with the ewes at once. This saves the trouble of caring for the ram during the summer and fall until desired for service. The care of the ram during the mating season will depend to a certain extent upon his condition and to a greater extent upon the number of ewes to be bred. The breed of the ram also plays an important part in the number of ewes that will be bred. If a show ram is to be used, he must be used moderately and then only with supplementary feed. A ram in field condition will handle twenty to thirty ewes without extra feed and care if the ewes are running on fair pasture. Over this number, it is advisable, with the average ram, to give feeds of grain night and morning. If there are over fifty ewes, keep the ram in during the day and feed moderately on grain with plenty of green feed and good clover or alfalfa hay and then turn with the ewe at night, or turn the ram with the ewes night and morning and put each ewe out as she is mated. After sixteen days the mated ewes must be tried again to insure that none are returning. When the ram is handled in this way he will do excessive service without impairing his vitality and pulling him down in flesh. The prepotency of a sire varies to a certain extent according to his vitality and constitutional vigor.

When the breeding season is over allow the ram to run with the ewes, if he is in strong flesh, as he will then hold up fairly well. It is not a good policy to try to fatten the sire up quickly if he has lost flesh but rather to keep him only in strong working flesh acquired with plenty of exercise. Before the ewes start to lamb, take the ram away and either confine him alone or better still turn in with some other rams or wethers. Many rams become very restless and irritable when alone and this should be avoided. A ram that has become cross when with the ewes may be cured by turning him with other rams—providing the other rams do not use him too roughly. A good stock ram should not be fitted for shows and at the same time used for service.

In the summer time the ram may be turned with the ewes and lambs on pasture and will generally do well enough on whatever pasture the ewes are given—both before and after the lambs are weaned. When any of the ewes are coming in season in the fall, the ram must be taken from the flock, unless early lambs are desired,



Pride of Nullmills.

A champion at Perth, and sold for 3,100 gs.

crowd of overseas men who were touring the North inspecting the leading Shorthorn and Aberdeen-Angus herds and Highland cattle folds, with the Clydesdale studs.

Ayrshire Activities.

At the Boreland of Balmagrie sale of Ayrshires recently, 92 head of all ages made an average of £46 4s and 70 Ayrshire cows made an average of £53 16s. 3d. Great interest is being taken in milk records, and there is undoubtedly much room for improvement in these. Great advances have been made where the system has been in operation for about twenty years, but there is still great room for improvement. The Ayrshire Herd Book Association and the Ayrshire Agricultural Association have resolved to adopt a scale of points in show-yard judging, which gives thirty-five per cent. to the authenticated milk yield in the case of a cow, or thirty-five per cent. for authenticated milking pedigree items recommended are thirty per cent. for form, symmetry and constitution, and thirty-five per cent. for mammary development, which phrase is to include size of teats, shape of udder, and milk veins. Should this scale be adhered to, it will undoubtedly modify, about seven ty-fiv per cent. on the shape of the udder and hang of the teats, and took next to no account of conformation and constitution. That all this is commendable reform is evident from such a fact as this. Recently in connection with a Government inquiry the authenticated milk yields of fourteen of the best

and turn him if they are not Middlesex

W.C.

On April 2 successful Sh disposed of for attended by bidding was brought out fashionable br shank Butter Geo. Amos &

Where is t sight than in t of the barn, on are frolicking forming antics the young thin ful eye on the would harm o and herds are the greatest in gentle call of t bawl of the cal to the stockma pens and yards increase means new stock. It in breed type a

To have t necessitates ha to parturition. in certain trou when animals to give consid to and at the t time for the liv a good deal on some diseases each year bring most constan ulities or sym would soon pr young things The dams, too feeding, and no stock invite dis to perish thro is this true at such high p preceded.

It is essent yet not over-fa roots or silage gaining in flesh condition cann and rugged a nor can she be pail. Care sho come chilled c advisable to ta day or two afte Many find that is beneficial. it is not advis for at least tw fever. This c producing fema The disease is u it is believed th freshens creat to gain a fo becomes para to the side, an ing may provo the throat. It distending the oxygen has re to have a vete available cows udder by the u

The most i gestation is on the offspring c harbored in th ever, permit of the year. The conditions so f providing succ cleaned. In s where parturit and animals a this natural spi overcomes the which is suita excellent feed make satisfact the end of he give a quart of to Epsom Salt to freshen a detrimental.

The cow du

and turn him with the last springs wether or ram lambs, if they are not sold, until required again for service.
Middlesex Co., Ont. D. E. McEWEN.

W. Grice's Shorthorn Sale.

On April 2, William Grice, of Oakville, held a very successful Shorthorn sale when eighteen head were disposed of for the sum of \$5,765. The sale was largely attended by breeders from all parts of Ontario, and bidding was brisk throughout. The offerings were brought out in splendid condition and represented fashionable breeding. Locust Butterfly 5th, a Cruickshank Butterfly with calf at foot, was purchased by Geo. Amos & Sons, at \$525. The imported cow,

Florence 56th, went to H. Inglehart, of Palermo, at \$650. This was the highest priced animal of the sale. J. F. Mitchell, of Burlington, paid \$500 for Maple Shade Nonpareil 10th, a three-year-old heifer. The females, including mature cows and a number of heifers under two years, averaged \$310.34, while the three males averaged \$370. Following is a list of the animals selling together with the names and address of their purchasers:

Females.		Males.	
Eclipse, Batty Bros., Meaford.....	\$275	Oakville Prince, Jas. Black, Aberfoyle.....	500
Locust Butterfly 5th, Geo. Amos & Sons, Moffat.....	525	Choice Goods, F. Swing, Jarvis.....	350
Florence 56th (Imp.), H. Inglehart, Palermo.....	650	Gloster Ideal, W. F. Inglehart, Palermo.....	260
Nonpareil of Oakville, J. F. Mitchell, Burlington.....	300		
Maple Shade Nonpareil 10th, J. F. Mitchell.....	500		
Maple Shade Lustre, G. F. Annis, Bowmanville.....	395		
Ballechin Daisy, W. H. Crowther, Welland.....	275		
Waterloo Lady, Frank Ford, Omagh.....	225		
Fanny B. 65th, F. E. Holmsted, Ancaster.....	360		
Crimson Vine 13th, W. P. Graham, Shanty Bay.....	180		
Crimson Vine 12th, C. B. Swackhammer, Acton.....	250		
Fanny B. 71st, W. H. Pugh, Myrtle Station.....	185		
Crimson Vine 11th, S. Griffin, Acton.....	200		
Victoria 2nd, W. P. Graham.....	160		
Alice Queen, Geo. B. Smith, Ancaster.....	175		

Springtime in the Barnyard.

Where is there a more attractive and interesting sight than in the clean, straw yard, on the south side of the barn, on a sunny April day when the young lambs are frolicking about, and the calves and pigs are performing antics which develop bone and muscle? While the young things scamper about the dams keep a watchful eye on the proceedings, and woe unto the person who would harm one of their offspring. While the flocks and herds are being added to during the entire year, the greatest increase usually arrives in the spring. The gentle call of the lambs, the grunting of the pigs, the bawl of the calves and the whinney of the colts are music to the stockman's ears. Fortunate is the breeder whose pens and yards are inhabited with new life. The natural increase means more to the breeder than the purchase of new stock. It is the result of matings towards his ideal in breed type and conformation.

To have the young stock arrive strong and healthy necessitates having the dams in proper condition prior to parturition. Domesticating the animals has resulted in certain troubles and diseases which were unknown when animals were in the wild stage. It is necessary to give considerable attention to the stock previous to and at the time of parturition. Spring is the busiest time for the live stock farmer, and the success depends a good deal on the attention he pays to details. While some diseases and troubles are being mastered, each year brings additional problems, so that the breeder must constantly be on the qui vive to detect any irregularities or symptoms of ailments which, if neglected, would soon prove fatal. Undoubtedly, a good many young things die every spring through sheer neglect. The dams, too, are sometimes lost. Pampering, over-feeding, and not giving sufficient exercise to the pregnant stock invite disaster. At no time should stock be allowed to perish through carelessness, and more especially is this true at the present time, when animals are selling at such high prices and the demand for meats is unprecedented.

The Cow and Her Calf.

It is essential that the cows be in good condition, yet not over-fat, at the time of freshening. Clover hay, roots or silage, with sufficient grain to keep the cow gaining in flesh, make an ideal ration. A cow in poor condition cannot be expected to give birth to as strong and rugged a calf as if she herself were in fair flesh, nor can she be expected to give as good results at the pail. Care should be taken that the cows do not become chilled either before or after freshening. It is advisable to take the chill off the drinking water for a day or two after parturition, and to feed lightly on grain. Many find that giving a bran mash for the first few days is beneficial. In the case of heavy producing cows, it is not advisable to milk the udder out completely for at least two or three milkings, so as to prevent milk fever. This disease frequently attacks the heaviest producing female within about two days after freshening. The disease is unknown with cows on range; consequently it is believed that emptying the udder soon after the cow freshens creates a condition which permits this trouble to gain a foothold. The entire system practically becomes paralyzed; the patient lies with her head turned to the side, and with a glassy stare in her eyes. Drenching may prove fatal, owing to the partial paralysis of the throat. If the cow falls a victim to the trouble, distending the teats and udder with sterilized air or oxygen has resulted in complete recovery. It is well to have a veterinarian do this, but should one not be available cows have been saved by pumping air into the udder by the use of a bicycle pump and teat siphon.

The most ideal place for animals well advanced in gestation is on pasture. Here there is little danger of the offspring contracting contagious diseases which are harbored in the stable. Our climatic conditions, however, permit of running the stock on grass less than half the year. Therefore, it is advisable to imitate natural conditions so far as possible in the stable, by means of providing succulent feed and having the stall thoroughly cleaned. In some sections the mortality runs high where parturition takes place before the grass starts and animals are allowed to condition themselves with this natural spring tonic. The good stockman, however, overcomes these difficulties by compounding a ration which is suitable to the animals in his care. Roots are excellent feed for pregnant animals, and oats and bran make satisfactory concentrates. If the cow nearing the end of her gestation period becomes constipated give a quart of oil along with laxative feed in preference to Epsom Salts. The latter are too severe for a cow due to freshen and the administering of them might be detrimental.

The cow due to calve should be turned into a roomy

box-stall. She can then lick the new born calf which puts the blood into circulation. When the cow is tied it is not uncommon for a calf to perish before the attendant arrives. If a calf is dropped on a cement floor it soon chills if the weather is anyways cold. A chilled calf may fall a prey to diseases and ailments which if it were warm and comfortable it could easily ward off. As germs of some diseases lurk in the dark recesses of the stalls it is well to thoroughly clean and disinfect the pen used for cows freshening. Use an abundance of clean straw.

Under ordinary conditions it is not advisable to interfere during parturition. However, the attendant should be on hand to assist if there should be abnormal presentation or the labor unusually difficult. If the calf is coming wrong skilled help should be obtained. Assistance is often given by pulling outward and downward when the cow labors. Avoid using too much force if possible. Do not jerk; rather have a steady pull. A rope and pulley may be used. If parturition is so difficult that it required the united effort of three or four men pulling at once, the veterinarian should be called in as he may be able to remove the calf without undue injury to the dam. It is not uncommon for the pelvic bones to be split, the tissues torn or the patient so injured as to cause partial paralysis by undue and injudicious force. If the afterbirth is not expelled within twenty-four

This is a contagious disease and it is believed that the germs of the disease enter the system through the freshly-severed navel cord. Using a disinfectant as soon as the calf is dropped helps to prevent the trouble. This disease is seldom troublesome when cows freshen on pasture thus showing that the germs must be in the stable and points out the necessity of having the stalls thoroughly disinfected.

The young calves will soon learn to pick at a little grain and hay. If they are in a pen with a calf a few weeks older than they are, they will learn to eat so much the quicker. The sooner a calf commences to take these feeds the faster it will develop. A little whole oats, bran and turnips, with a handful of fresh clover or alfalfa hay, should be put in a convenient place in the pen when the calf is two or three weeks old. Do not allow the feed to become stale, but empty the feed trough every day and put in fresh. If the calf is fed skim-milk, using a little oil cake and cornmeal helps to supply the fat removed from the milk. If the calf is to be kept thrifty it must have all it will eat without upsetting its digestive system, and it must be kept in a clean, dry, well-ventilated pen. The calf that is stunted through neglect and the lack of proper rations will not develop into as valuable a mature animal as it would had it received proper attention when young. No breeder can afford to neglect the young stuff. Along with feed



Getting Their Beauty Sleep.

hours it should be removed. This also requires experience and care to avoid injury to the patient and to remove all the membranes. If a portion is left it may decompose and more or less poison the animal's system. The womb should be flushed out several times with a warm disinfectant solution.

After the calf is born the herdsman should see that it is able to suck and obtain the first milk, which is of a laxative nature and is provided by nature to give the young calf a start. If the cow is to be hand-milked, it is well to separate the calf and dam after the first day. Four or five quarts of whole milk is sufficient for the new-born calf. This may be increased to six or eight quarts as the calf develops. Where calves are pail-fed they are usually put on skim-milk after they are a few weeks old. It is well to make the change from whole to skim-milk gradually, and care should be taken not to over-feed in order that indigestion and diarrhoea may be avoided. Scours is a common disease in the calf herd. Clean stalls, well-ventilated pens, scalded pails, and the right quantity of milk fed at the proper temperature, all help to prevent this disease. Adding a little lime-water to the milk also helps to keep the digestion right. Calf cholera sometimes attacks the youngsters which are raised on the cow, as well as those fed by the pail.

they require exercise and a clean sunny barnyard is a good place for them to play in.

The Flock Needs Attention.

The care and attention mentioned in regard to bovines at the time of parturition applies in a measure to the care of the flock. Good shepherds give their flocks unstinted attention at lambing time and are usually amply repaid for it. By proper care and feed during late winter and early spring, and then giving the proper attention at the right time saves the life of many a lamb which otherwise might perish. As spring approaches it is advisable to reduce the roots in the ewes ration and increase the grain. Oats, bran, a few peas and clover or alfalfa hay are relished by sheep. As lambing time draws near it is well to trim the wool around the udder. The ewe about to lamb should be removed from the main flock. When symptoms of parturition are discernible it is advisable for the shepherd to be on hand to give assistance if necessary. Where sheep have access to free range so as to secure plenty of exercise and have been fed properly assistance is seldom needed. However, there is always the danger of abnormal presentation and prompt attention will probably save the life of both the dam and the lamb. When

ards were tabulated. The
erds over a normal lactation
cow. There is urgent need
not in the dairy breeds alone,
t Britain we have too great
high merit of our pedigree
of the commercial stock
Alfred Mansell, Shrewsbury,
s' Club, London, in which he
of the inferior or bad sire.
ne the term, while he con-
as horses are concerned the
ma that is almost, if not al-
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ecture was delivered by the
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n for whom it was designed
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remarkably fresh and fit,
e went round the ring like
was the famous Macgregor
er twenty-two years old,
e Maud 11786, whose sire
hen he had completed his
he was rising twenty-three
oss Rose 6203, died when
d.

STOCK.

Header Through-Season.

FOUNDER'S:

bred ram in the flock is
results. The care of the
and after is also of due
results from mating and to
g his usefulness. The
er usually purchases the
arly in the season that
y get a good selection
es not take delivery till
eeding season. He is
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This saves the trouble
ing for the ram during
mmer and fall until de-
or service. The care of
am during the mating
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reater extent upon the
r of ewes to be bred.
reed of the ram also
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r of ewes that will be
If a show ram is to be
e must be used moder-
nd then only with supple-
y feed. A ram in field
on will handle twenty
y ewes without extra
d care if the ewes are
on fair pasture. Over
mber, it is advisable,
e average ram, to give
rain night and morn-
there are over fifty
keep the ram in during
and feed moderately
ed and good clover or
the ewe at night, or
night and morning and
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be tried again to insure
en the ram is handled
ssive service without
ing him down in flesh.
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tional vigor.

over allow the ram to
ng flesh, as he will then
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the ewes start to lamb,
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ss and irritable when
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may be cured by turn-
ling the other rams do
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e time used for service.

may be turned with
d will generally do well
ewes are given—both
eaned. When any of
the fall, the ram must
rly lambs are desired,

assistance is necessary it is advisable to disinfect the hands and apply carbolized oil to them. It takes practice to become adept at rendering assistance. If experience is lacking it is advisable to call in a neighboring shepherd or the veterinarian. Sometimes the lambs come very weak and require immediate attention. The lamb should be dipped in warm water and then rubbed dry or else wrapped in flannels and placed beside the stove. A draft of the dam's milk usually revives a lamb as quickly as anything. If the ewe is very sick she may not own her offspring and it will be necessary to hold her a time or two while the lamb feeds. If the flock is large the shepherd is kept busy day and night during lambing time especially if lambing occurs before the flock goes on grass. Many flock owners breed so that lambing takes place on in May when the flock is on grass. The mortality is then very small as a rule. The lambs will soon learn to pick at hay and grain. These feeds should be in a place accessible to the lambs with the ewes excluded.

The Pig Crop.

The sow that is fed on roots and sufficient grain to keep her in flesh and that has the run of the barnyard seldom has much trouble at pigging time and as a rule rears her litter well. The vices to which some sows are addicted are frequently due to an improper ration during the gestation period. Failure to supply feeds containing sufficient mineral matter may result in weak pigs. It is a good plan to give the sow access to a mixture of wood ashes, salt, charcoal and sulphur; copper s and salts may be added to the mixture with beneficial results.

Have the sow in the farrowing pen a few days before pigging so that she will become accustomed to her new surroundings. A laxative feed is advisable. Constipation should by all means be avoided. Some hog men give the sow a liberal quantity of straw while others prefer using a small amount of chaff or cut straw. A railing around the pen projecting out about ten inches from the partition and ten inches off the floor has saved many pigs from being crushed when the sow lays down. If the sow is restless it is a good plan to remove the pigs as they are born and place them in a basket. If the weather is cold hot bricks in the bottom of the basket keeps the young pig warm. When the sow quiets down the pigs may be placed with her. However in several instances we have found it advisable to leave the pigs in the basket over night. Feed carefully for a day or two but when the sow comes to her milk she will require heavy feeding, especially if the litter is large. If the sow is a poor milker get the pigs taking cow's milk as soon as possible. If a few pieces of rag are placed in a dish of milk the pigs will soon start sucking them and in this way get the milk. Avoid getting them overfat if thumps would be prevented. If a run from the pen can be provided so much the better as the pigs will then take exercise which goes a long way toward warding off ailments to which young pigs are subject. In the spring of the year and during the summer the barnyard makes an ideal place in which young pigs can exercise.

The colts arrive a little later in the season with their wobbly legs and tricky ways. More attention is usually given to the pregnant mare than to the other classes of stock as both she and her colt are considered more valuable. Exercise is essential for the mare but heavy draws, backing, slipping, etc., should be avoided. A brood mare carrying a foal will take her place in the team during seeding without injury provided the driver is careful. A liberal ration is required if the mare is working steadily.

A falling away of the muscles at the tailhead and a filling of the teats are indications of the approach of foaling time. Wax forming on the teats is usually a sure indication that the mare will foal in a day or two. Joint ill causes the loss of many colts. One preventive measure is to disinfect the navel as soon as the colt is born and to apply some disinfectant several times daily until the navel dries. A ten per cent. solution of carbolic acid may be used. The strong colt soon takes nourishment and does not give much trouble. The mare should be given two or three weeks rest and she and the colt turned on grass. If the mare is worked the colt should not be allowed to suck while she is very warm. Although some allow the colt to follow the mare at work it is not considered a good practice as it tires the foal unduly.

The man who is interested in his work delights in seeing the herds and flocks increase, thrive and grow up under his care. A calf, colt, lamb or pig born on the farm is entitled to satisfactory rations and comfortable quarters. The men who neglect the dams and young things at time of parturition and then fail to give the needed attention necessary to develop substance and health in the young stock are heavy losers. Some men seem to have a knack in caring for stock as it always thrives under their care. Those on the farm nor born

with the intuition of properly looking after stock should cultivate the art. Thrifty sheep and healthy animals command the attention of all lovers of live stock. Even in the rush of seeding it pays to attend to details pertaining to the stock.

Tuberculous-Free Herds in Canada and Proposed Legislation.

In view of the fact that Hon. T. A. Crerar, Minister of Agriculture, stated before a meeting of the Agricultural Committee of the House of Commons that he desired to bring down in the Supplementary Estimates an appropriation of \$50,000 to start the establishment of accredited herds free from tuberculosis in Canada it is appropriate that this question receive some consideration by live stock men. If the Minister succeeds in his evident desire to have this item passed by the Cabinet Council and brought down to the House for consideration, we should be prepared to form an intelligent opinion as to what the effect will be. Having this in mind, a representative of "The Farmer's Advocate" interviewed Dr. F. Torrance, Veterinary Director-General as to what changes in inspection and the status of inspected herds would likely follow the adoption in Canada of an accredited herd system.

As is fairly well known, the United States has had such a system in operation for about a year and a half and by agreement between Dr. Torrance and the Chief of the Bureau of Animal Industry at Washington, animals from accredited herds in either country may be exported to the other country without inspection or test for tuberculosis. Here in the opinion of the Veterinary Director-General, is the great value of an accredited herd to the Canadian breeder. However, we in Canada have no accredited herds as yet, but when or if we do have them, the rules or regulations governing their inspections and the standards set up, must be practically identical with those now in effect in the United States, because of the existing agreement.

According to the United States Act, an accredited herd is one which has been subjected to the tuberculin

test. Dr. Torrance is of the opinion that it would be a good thing if all tuberculin tests were made by officers of the Health of Animals Branch and petitions have been received to this effect, but there is naturally considerable opposition to such a proposal. There are a great many herds in Canada that are not yet fully built up and if these were entered in any scheme for accredited herds, their owners would experience considerable inconvenience and perhaps a considerable financial loss. Under an accredited herd system an animal purchased from a herd that was not accredited must be tested and kept separate from the accredited herd for a period of 60 days pending a re-test at the end of that period. This means that if an accredited herd owner wished to purchase a pure-bred animal for \$500 and after isolation and retesting the animal reacted he would be forced to stand the loss unless the previous owner would sell subject to these conditions. Even so the expense maintaining the animal separately for 60 days would have to be borne.

On March 1, 1919, there were 402 accredited herds in the United States and 1,996 pure-bred herds had been tested without showing reactors. In the opinion of Dr. Torrance there will be about 1,500 accredited herds in the United States after the next list is published in June. Of 3,210 pure-bred herds and 1,858 grade herds tested reactors were found in 1,224 pure-bred and 729 grade herds. Apparently nearly every State in the Union is falling into line with the Federal policy for the eradication of the disease and the legislatures of about 20 States have passed, or are about to pass, the necessary legislation.

Perhaps just here it would be interesting to note the progress which has been made in the State of Minnesota since 1904. The figures herewith given have no necessary connection with accredited herds, but serve to show that progress by individual testing is slow although nevertheless evident.

Period	No. Animals Tested	No Reactors	Per Cent. Reactors
1904-10	122,978	8,908	7.8
1910-17	248,586	9,334	3.7

For ten or twelve years the Health of Animals Branch has conducted the testing of herds for tuberculosis where owners signified a willingness to put their herds under the control of the Branch so far as the eradication of this disease is concerned. At present there are 50 herds under control, of which 35 are privately owned and 15 are owned by Government institutions both provincial and federal. Twelve herds out of the fifty passed the last test without showing any reactors so that there are 12 herds in Canada that are now ready to be rated as accredited should this system be put into effect. The response to the offer of government control has not, in the opinion of Dr. Torrance, been as complete as was anticipated, but he recognizes that up to the present there has been no great inducement to private herd owners to go in for it.

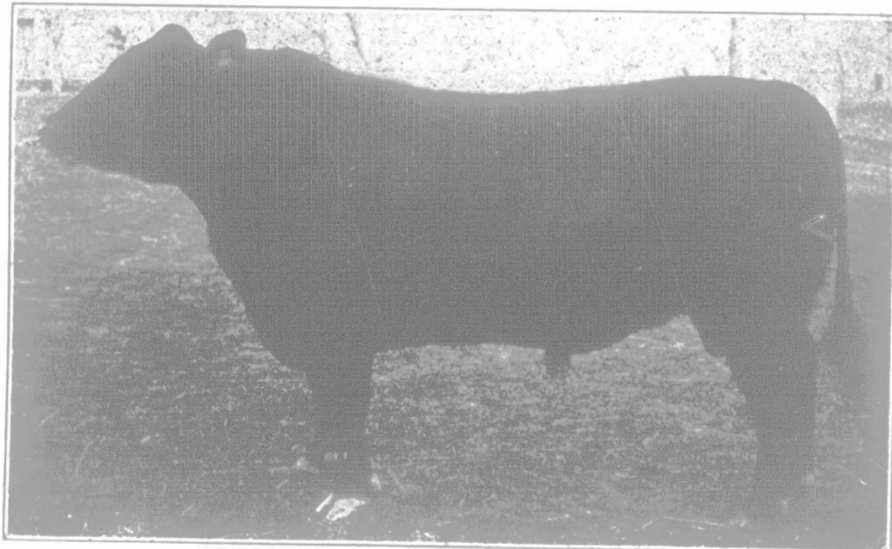
Compensation is, of course, a most important consideration in outlining any scheme for the control of animal diseases. This, in the case of the United States, is provided jointly by federal, state and municipal governments. The two latter may assist to whatever extent they wish, but federal assistance is limited by the Act, on the principle that federal, state and municipal governments and the owner shall each bear 25 per cent. of the loss. When an animal is condemned for slaughter, federal, state and municipal officers jointly give it an appraised value, based on the value of the animal before becoming tuberculous. Federal compensation is limited to \$25 for grade animals and \$50 for pure-breds with the additional provision that such compensation shall not exceed one-third of the difference between the appraised value and the amount recovered in salvage. Thus, if \$50 salvage was recovered from the carcass of a pure-bred animal appraised at \$150, the amount paid by the Federal Government would be limited to \$33.33 whereas as if the animal were a grade, the Federal Government would only be liable for \$25. In any case compensation paid by the Federal Government shall not exceed that paid by the state, county or municipality.

The Canadian law prescribed by sections six and seven of the Animal Contagious Disease's Act is more liberal in respect of compensation paid by the Federal Government. The Canadian law fixes the values which may be placed upon any condemned animal and then provides for the payment of two-thirds these values, the limits of which are given herewith.

Kind of Stock	Grades	Pure-bred
Horses	\$200	\$500
Cattle	80	250
Sheep and Swine	20	75

Record Prices at Calgary Sale.

At the Calgary bull sale, on April 9, T. B. Ralphs, of Calgary, sold a Shorthorn bull of his own breeding for \$3,800, the highest price ever paid for a bull of any breed at the Calgary sale. The previous high record was \$3,200 for a Hereford bull. This is the second highest price paid at auction in Canada for a Scotch-bred Shorthorn bull. Davison Bros., of Redwillow, Alta., were the purchasers.



Edgar of Dalmeny.

Champion Angus bull at Michigan State Fair. Sire of the Perth champion bull, 1919, which sold at 2,100 guineas. Owned by W. C. Scripps, Detroit.

test by Federal authority twice annually in succession or three times semi-annually in succession, without any reactors having been found. The system adopted is a practical form of co-operation between federal, state and municipal governments. Each state makes a separate agreement with the Federal Government whereby they pay a certain proportion of necessary costs and provide a part of the compensation given to the owner of a condemned animal. Such a system would hardly be feasible in Canada because control of animal diseases is centralized in the Dominion Health of Animals Branch, whereas in the United States each state has its State Veterinarian and in some cases a veterinary department has been established. It is probable, therefore, that in Canada all the compensation would have to be paid by the Dominion Government. While tests are made annually or semi-annually, the Federal Government may make a re-test of all or any part of a herd at any time. This seems to be necessary, but, of course, frequent tests are by no means desirable. This is very evident from the fact that too frequent testing leads sometimes to partial immunity from the test. So well known in this danger of immunity that unscrupulous breeders not infrequently "plug" an animal with tuberculin so that it will gain this immunity and thus pass the test without reacting. This has led to a tendency to cover up the disease in many cases until a mere certificate that an animal has been tested within a short time is not always reliable. This immunity can be secured for as long a period as 60 or 90 days so that retests are necessary to secure absolute accuracy.

The work of testing accredited herds must, of course, always be done by Government officers, so that one of the great difficulties of independent testing is thus done away with. Private tests have frequently been shown to be unreliable since cases have been known where unscrupulous veterinarians have filled in a report form with

Competition

At the annual Association, held in Caledonia, the idea of a competition similar to the Field so much during the quality of crops, the idea met with hands of the Executive, and already has for a competition of the flocks. A number in the competition every flock in the liberal prizes which

The Province is competition. The Counties; 2, Renfrew and Peterborough Sound and Muskoka and Grey; 8, Huron 10, Manitoulin Island, Nipissing District, Bay Districts. The competitors must Breeders' Association through this Association on the score card, and condition. In points will be taken, flock, dipping, docility, type of ram, of wool when sheep, exception of the type, item is ten, and of grade or pure-bred the competition can be created, should and in more modern hoof being adopted, association has drafted, quality and clean crop, general condition the competition will to see if improvement to culling of the breed to caring for the flock of wool, and to make free from burs and right time and non this will tend to improve Province.

We believe the who are capable of castrating, fleece type to give breeders, information in flock. Could not a sim beef cattle, dairy cattle toward improvement young men just start competitions and which they could feeding operations the show-ring have flock and herd grade stock, as well

Canada's

In a recent is it was announced a missioner, would spend some time in possibilities of extensive live-stock industry in the markets of other countries. Mr. April 8, and it was following day. The Live-Stock Commission stock industry. To gloss over any production methods for live-stock men. With pleasure the shipment of our export products and at the opportunities will take advantage of reasonable and under Dominion Government to watch our live-stock we gather that the trade relations with people of Great Britain are still open over, and European so that, to speak the present favor the very best possibility of paramount importance of the live to draw accurate things Canada's position on the British well represented the the grain, and the the necessary for qu

for urban and rural schools include much in common. But, while this is so, it is quite possible to relate much of the school work to the children's environment, without detracting at all from the cultural value of such work. For example, a city boy might write an essay upon street cars, or solve a mathematical problem connected with the building of a bridge, whereas his country brother might obtain his practice in composition in writing about the growing of oats, and his mathematical training in working out the area of a field. The principle here exemplified could be applied in many cases with great profit.

In the second place, I think we should not be satisfied until there is within the reach of the country boy and girl opportunities for so-called secondary education equal to those existing in the cities. We ought to have rural high schools. It is said that 98 per cent. of farm boys and girls never get anything more than is provided in the ordinary primary rural school. If this be true it is a standing disgrace to our Canadian civilization. It ought not to be. Every farmer's child who has the ability and desire for a better education than is obtainable in the primary school should be able to get it without going away from home to attend a city or town school.

In the third place, it seems to me that we could well have one community centre, where one building would serve many purposes, all of which could be described broadly by the one word *educational*. Why not? Why have a great many small buildings devoted to special purposes where one building would serve all? My idea is—and has been for years—that each rural community should have a large central building that would serve many purposes, viz.:

1. It would provide rooms for graded primary school work.

2. It would provide rooms for graded secondary school work.

3. It would provide a large auditorium for all kinds of public meetings, including church services.

4. It would provide indoor gymnasium and recreation facilities.

5. It would provide room for a community library, a community museum, or anything of like character. And, finally,

6. It would provide accommodation for whatever technical instruction was arranged for in the educational system.

This central building should be surrounded by grounds large enough to provide for outdoor games and recreation, for school gardens and simple experimental plots for community picnics, etc. And provision for housing should be made also, in the immediate neighborhood (possibly on the grounds themselves) for most, or all, of those engaged in carrying on the educational work of the community.

Now the objection that will be first urged against the plan I have outlined is that of expense. "It will cost too much." I would reply to this objection in three ways: (1) When farming gets what it earns we need not bother about the expense. (2) A good thing earns its own cost. (3) The cost is much less than would appear at first glance. Let me elaborate the last point a little. We have now within the bounds of such a community as might be served by the institution outlined, the following buildings, as a rule:

1. Three or four church buildings.
2. Five or six school houses.
3. Perhaps a township or village hall.
4. Residences or boarding-houses for teachers and clergymen.

Crop Rotations for the Farm.

The value of thoughtful planning and head work is becoming more and more recognized of late in all branches of farming. The breeder of any kind of live stock recognizes the fact that indiscriminate mating of animals more often than not results in very low profits. The man who plants out a young orchard without an idea of how he will take care of it in future years and who fails to follow recognized principles of successful orchard culture is doomed to failure from the start, just as is the man who buys wantonly much more machinery than he needs, simply because he didn't think ahead and balance absolute necessity against the size of his bank account. The same thing holds true exactly in regard to planning the crops on the farm. It is a well-known fact that one cannot continue for many years to mine the soil with impunity and expect crop yields to increase or even remain stationary. Soil fertility is a fundamental consideration in any line of farming that depends to any extent upon the growing of crops. The value of live stock on the farm has its very essence in this question of soil fertility, but at the same time the mere fact that live stock is kept in abundance on a farm is poor proof that there is a proper balance of plant food being maintained in the soil. To grow good crops and profitable ones, the soil should also be clean, and this is no small point in profitable farming in these days when

farm, of course, presents a problem all by itself, and sometimes these problems are very peculiar. At the same time there are certain considerations which it is always wise to take into account, and certain methods of procedure which are common to a great many instances. Consequently, it is not at all surprising that part of the work done by our experimental farms should consist of attempts to classify various kinds of cropping systems and determine their relative values by experiment and test over a series of years. A study of crop rotations has long been a part of the work done by the Dominion Experimental Farms, and a representative of "The Farmer's Advocate" recently discussed the question with W. L. Graham, Acting-Assistant Field Husbandman at the Central Experimental Farm, Ottawa. At this farm a system of crop rotation has been followed for at least 15 years and probably for much longer, as the records would probably show if one took the trouble to look them up. The one followed at the present time at Ottawa is a three-year rotation consisting of hoed crops, such as corn, roots and potatoes, followed by wheat, oats or barley seeded down to a mixture of six pounds of alfalfa, ten pounds of red clover, two pounds of alsike and six pounds of timothy. This seeding would be considered much too heavy by a great many farmers, but at the Central Experimental Farm

Together with a considerable area of land in scattered lots.

Would it be much more expensive to build, equip and heat the one large structure than to erect, equip or maintain the numerous small ones? Calculate the amount of roofing, for example, on the 10 or 12 small buildings, and see what amount of accommodation it would cover in a three-story edifice with basement! What of the cost for heating, plumbing, etc.? There is no need to dwell further on this point.

But, you will say: We have the small buildings already here, what are we going to do with them? There it is—the problem of breaking with the past. Well, sometime or other we shall have to make a change. Schools, churches, etc., are being built all the time. When we have to move let us move forward, not backward. What is more tragic than to see good money invested in a building that is out of date and out of harmony with the needs of the time! Should we build for the past or for the future? I am satisfied that if we could get people to see the extraordinary advantages of co-operative effort (in education as in commerce) and secure a fairly unanimous desire for such a community centre as I have outlined, we should have more than half the battle fought. "Where there's a will there's a way."

The Ontario Government professes to be ready to aid in the erection of "community halls." If we are going to build anything new, can we not build something worth while, and not add to the number of small buildings which are used only for a fraction of the time? Don't invest a dollar in anything of this sort until you see further ahead than next year.

Brant Co., Ont.

W. C. GOOD.



The Double Cutaway Disc is Used Extensively on the Central Experimental Farms.

weeds are so numerous and labor so expensive and hard to obtain. For other reasons, as well as it is not only desirable but essential that the crops for the farm should be very carefully and intelligently thought out. A definite cropping system or rotation of crops is of very great advantage, and an increasing number of farmers are beginning to consider such a system indispensable. System is a great thing and a valuable factor in nearly everything we do, so that it is not at all surprising that application has been found for it in the raising of farm crops.

Nearly every farmer has in his head some kind of cropping system for his farm, but a great many of these systems are not very carefully thought out. Each

heavy seeding is very much in favor. "We recognize," said Mr. Graham, "that such seeding is heavy, but we would recommend that the farmer sow at least 18 pounds per acre if he does not want to sow 24 pounds as we do here. If 18 pounds is used I would suggest four pounds of alfalfa, eight pounds of red clover, two pounds of alsike and four pounds of timothy." We use this crop either for hay or pasture but usually for hay, in which case we always make two cuttings, and in favorable seasons three. The one difficulty we experience with such a mixture is in determining just when the first cutting should be made, in order to secure hay of the best quality. If left until the usual time of haying the alfalfa will become too woody, so that for this

district we usually find the latter part of June the most suitable. As a matter of fact, the date of the first cutting of this crop is governed largely by the maturity of the alfalfa and the usual rule of cutting, when about ten per cent. of the alfalfa is in bloom, is probably about as good a rule to follow as any. The second cutting will consist principally of red clover and alfalfa, while the latter will constitute practically all of the third cutting in seasons when this is possible. In 1918 we secured only two cuttings, and the yield was something over three tons per acre. We had 31 acres of hay in this rotation and 9 acres of pasture. The hoed crop section contained 34 acres of Wisconsin No. 7 corn which averaged 18 tons per acre, while 40 acres of oats averaged 77 bushels per acre. We do not grow wheat here because we require large quantities of oats for feeding purposes.

"Manure is spread on the hay land in winter, direct from the stables at the rate of 18 tons per acre. Our land is suited to this method of applying manure, as we have no leaching and only a very little flooding. We watch the latter carefully, of course, and govern ourselves accordingly. It might be worth while mentioning that we have never used artificial fertilizers in this rotation and, in fact, we use none at all, except in some of the smaller plot experiments."

Preparation of the Land.

Corn land is usually spring plowed just before planting time, although if there was time some of this plowing would be done in the fall. Fall plowing, we were told, is especially desirable for heavy clay soils, as soils that will puddle, but loams such as are found on the farm at Ottawa should preferably be spring plowed. Mr. Graham believes that plowing under fresh manure in the more open soils just before planting time, tends to raise the temperature of the soil somewhat, due to the fermentation of the manure. Two-furrow plows drawn by three horses with single plows to open and close, are preferred and considered most economical. This is not only true for the large farm but for the 100-acre farm as well. After plowing, a soil packer is used, but for the average farm a heavy land roller will take the place of the packer. Then a double disc is used, and the cutaway type is very highly prized for this purpose. In corn land there should be few furrows and these must be well filled and the cutaway has its only disadvantage here; it will not do any filling. It is considered to be such an economical tillage implement, however, that a disc of this type or an ordinary disc with a trailer, would be of value to everyone. After using the double disc thoroughly, a drag or smoothing harrow is put on, followed by the roller, after which the land is seeded. Corn is sown at the rate of 20 pounds per acre in rows 42 inches apart. The object in using such a heavy seeding is, of course, to get a good stand, and if the corn comes up too thickly it can easily be thinned out with a slant-toothed harrow which will also help to keep down early weeds and conserve moisture.

For grain, the corn ground is fall plowed, and seedbed preparation consists of double discing, harrowing, rolling, seeding, and harrowing again after seeding. The latter is considered to be of particular value in checking the evaporation of moisture from the soil. If the soil is very dry it might be well to roll first and leave for a day or two to draw the moisture to the top. Rolling will also have an influence in raising the temperature of the soil until evaporation starts, when the harrow should be used.

Modify to Suit Conditions.

Of course, there are many other rotations that might be followed and, in fact, quite a number of different

systems are used on farms and state grain and hay just enough variations combinations of provision must amount of land large to handle. "There met with on in any case rotation be fol possible to do first, but such stantly, and as the farm should suitable for the more economical this reason we

A three-year Eastern Canada course, advisable rotation, or, two on the same fa too much land oats may be so tion. Where th to use some cr to allow for af greatest impor systems can we where, we will which 15 acres Summer-fallow and more or les able to follow the remaining rotation until th be devoted to a peas and oats, t early so as to p alone may often to peas and o used for hay, as farms are weedy hills for a few. For very weedy worked out whi moment to peas good advantage clover have been thereby upset plowing, follow grain crops is th parts by weight bushels per acre is when the pea are in the milk or O. A. C. 72 o

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W. C. GOOD.

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systems are being tested out on the different experimental farms and stations. The same principle of hoed crops, grain and hay or pasture apply to all, however, with just enough variation to meet the requirements of various combinations of circumstances. On the ordinary farm, provision must be made for permanent pasture, or the amount of land in hoed crops each year would be too large to handle with the amount of labor that is available. "There are innumerable variations that may be met with on different farms," said Mr. Graham, "but in any case we recommend that the principles of crop rotation be followed. It may not and frequently is not possible to adopt a definite system of crop rotation at first, but such a system should be kept in mind constantly, and as fast as the difficulties can be overcome the farm should be brought into a scheme of crop rotation suitable for the purpose. Definite crop rotations are more economical and profitable in the long run, and for this reason we urge their adoption wherever possible."

A three-year rotation is often found unsuitable in Eastern Canada, and in such a contingency it is, of course, advisable to add another year of hay to the rotation, or, two systems of rotation may be combined on the same farm. If a four-year rotation still leaves too much land for hoed crops, barley, peas, or peas and oats may be sown on a portion of this part of the rotation. Where this is done, however, care must be taken to use some crop which can be harvested early enough to allow for after-harvest cultivation, which is of the greatest importance in the control of weeds. Two systems can well be combined in the case of a farm where, we will say, there are 75 acres of arable land, of which 15 acres are badly infested with quack grass. Summer-fallowing this 15 acres would be very expensive and more or less uneconomical, so that it may be advisable to follow a special rotation for this field, leaving the remaining 60 acres to follow a regular four-year rotation until the quack is cleaned up. This field might be devoted to a three-year rotation of barley, roots and peas and oats, the barley and peas and oats coming off early so as to permit of after-harvest cultivation. Peas alone may often be used, but Mr. Graham is very partial to peas and oats, because he says this crop can be used for hay, as a soiling crop, or as a silage crop. Where farms are weedy it is usually advisable to plant corn in hills for a few years to permit of cross cultivation. For very weedy farms a soiling crop rotation has been worked out which is outlined later. Coming back for a moment to peas and oats, this crop can often be used to good advantage in cases where seeding of grain or clover have been killed by the winter, and the rotation thereby upset to a certain extent. Shallow spring plowing, followed by the usual soil preparation for grain crops is the best practice before seeding to equal parts by weight of peas and oats at the rate of three bushels per acre. The most suitable time for cutting is when the peas are forming pods and when the oats are in the milk stage. Golden Vine peas and Banner or O. A. C. 72 oats are good varieties.

Manure should never be applied directly to the grain crop. It should always be given to the hoed crop or applied on the new clover seedings as soon after the grain is cut as possible. Fifteen tons per acre is a suitable application at this time, and will stimulate growth, besides acting as a protection over winter.

Some Rotations Under Experiment.

Three, four and five-year rotations are under experiment as well as rotations for special purposes. The accompanying table shows a variety in rotations under experiment. Rotation number one is a three-year rotation similar to the one in use on the main farm at Ottawa. The kinds of grain used and varieties can, of course, be changed to suit local conditions or personal tastes. It will be noticed that oats appear as the grain in most of the rotations, but the reason for this was explained earlier. Rotation number three is a four-year rotation, in which commercial fertilizers and barnyard manure are both used. This appears to give better results than where either is used alone in larger quantities. Rotation number two is the type of rotation that could be applied to a great many farms. Roots and potatoes could easily replace some of the corn and other grains some of the oats if desired, although in the case of fall wheat some modification would be necessary. Perhaps in that case rotation number four would prove satisfactory, fall wheat taking the place of oats in the fourth rotation year. Number five is the special soiling rotation referred to above, peas and oats taking the place of grain in this three-year rotation. Rotation number six is a special rotation for hog lands. Many other variations are under experiment, but these few are sufficient, perhaps, to show the way by which a successful rotation may be planned.

Rotation number	Rotation year	Crop	Note re-treatment of soil and crop.
1	1	Corn	Apply manure at the rate of 18 tons per acre. Plow in spring, turning under clover and manure. Sow Wisconsin No. 7 in rows 42 inches apart.
	2	Oats	Sow O. A. C. 72 oats. Seed down with 10 pounds red clover, 2 pound alsike, 6 pounds alfalfa and 6 pounds timothy per acre.
	3	Hay	Clover hay. Cut two crops if possible.

Rotation number	Rotation year	Crop	Note re-treatment of soil and crop
2	1	Corn	Sow Wisconsin No. 7 in rows.
	2	Oats	Sow O. A. C. 72 oats. Seed down with 10 pounds red clover and 12 pounds timothy per acre.
	3	Hay	Clover hay. Cut two crops if possible.
	4	Hay	Timothy hay. Plow field shallow and apply manure in early autumn at rate of 24 tons per acre, work in and rib up.
3	1	Mangels	Mangels, Long Red. Sow in drills, using hand seeder. Apply 150 pounds superphosphate, 37½ pounds muriate of potash, 50 pounds nitrate of soda per acre, and harrow in.
	2	Oats	Sow O. A. C. 72 oats, seed down with 8 pounds red clover, 2 pounds alsike and 12 pounds timothy per acre. Apply broadcast 100 pounds nitrate of soda just as grain is coming through ground.
	3	Hay	Clover hay. Cut two crops if possible. Apply broadcast 100 pounds nitrate of soda in the early spring.
	4	Hay	Timothy hay. Apply broadcast 100 lbs. nitrate of soda in the early spring. Apply 7½ tons manure per acre in early August, plow shallow, top work and rib up late autumn.
4	1	Corn	Apply manure at rate of 15 tons per acre. Plow in spring, turning under clover and manure. Sow in rows 42 inches apart, Wisconsin No. 7.
	2	Oats	Sow O. A. C. 72 oats. seed down with 10 pounds red clover, 2 pounds alsike and 5 pounds timothy per acre. Top dress with barnyard manure in the autumn at rate of 15 tons per acre.
	3	Hay	Clover hay, cut two crops if possible.
	4	Oats	Sow O. A. C. 72 oats. Seed down with 10 pounds red clover, 2 pounds alsike and 5 pounds timothy per acre.
	5	Hay	Clover hay. Cut two crops if possible.
5	1	Corn	Apply manure at rate of 18 tons per acre. Plow in spring turning under clover and manure. Sow Long-fellow in rows 36 inches apart.
	2	Peas and Oats	Sow peas and oats, equal parts by weight, at rate of 4 bushels per acre. Seed down with 10 pounds red clover, 2 pounds alsike, 6 pounds timothy per acre. Cut peas and oats for green feed.
	3	Hay	Clover hay. Cut for green feed.
6	1	Pasture	Hog runs.
	2	Pasture	One-third barley at rate of 3½ bushels per acre, ½ early-sown rape on low drills.

Good agricultural implements are a prime necessity in modern farming. We are beyond the age of scraping the top of the earth and svinging the hoe. We are in the age of the tractor, the disk plow, the riding cultivator, the electric light plant and the gasoline engine on the farm.

Agriculture Must Have A Square Deal.

EDITOR "THE FARMER'S ADVOCATE":

In the Census of 1901 the rural population of Canada was 64 per cent. of the whole. In 1911 the rural population was 54 per cent. of the whole. Why?

In one State of the Union south of us 75 per cent. of the inmates of the insane asylums are wives and daughters of farmers. Why?

There are twice as many illiterates in the rural as in the urban population. Why?

There are thousands, yes tens of thousands of abandoned farms scattered all over the North American continent. Why?

The price of farm produce has been forced to hitherto unheard of figures, *only* because of scarcity, *not* because of control by the producer. Why?

I could place a string of question marks across this page with such questions as above before each one and answer them all with one sentence.

"Because agriculture is *not* getting a square deal." When miners, railway employees, when, in short, any class of laborers think they are not getting a square deal they drop their tools, make a spectacular demonstration, demand better conditions and *get* them.

Farmers for years have been gradually awakening to the fact that, as compared even with the ordinary ignorant laborer, they are not getting a square deal, but when they look around for relief, they find they are individuals and wield little or no influence. Instead of combining and stopping production, which for obvious reasons is an impossibility, they struggle on, selling their produce for less than it cost, until the load of debt becomes too great, when they either sell the farm at a sacrifice or abandon it for better-paid positions as laborers, mechanics or agents.

In a mental census of fifty farms in a locality in this county I found that thirty-four farmers have an agency, a little government job, or some side line to help out the income. Now, I know what I am talking about, for I have made a pretty careful study of all agricultural conditions in Canada for the past thirty years, and am acquainted with the poorest as well as the best conditions. One of the injustices which the farmer is daily compelled to face is the impression the public necessarily obtains of his prosperity through the medium of the daily and weekly newspapers, and even the agricultural periodicals.

One almost suspects the editors of the city dailies of seizing every opportunity to label the farmer as a heartless profiteer, since about all they know about country conditions is the prices they have to pay for their food after they, the prices, have been in many cases trebled by unnecessary middlemen and greedy transportation companies. Even our farm journals, with doubtless the best intentions, seem more willing to fill their pages with articles showing wonderful outstanding success in some line of farming than with articles giving a true average state of affairs. While this, of course, is done to encourage the spirit of emulation and increase the efficiency of their farmer readers as well as encourage others to take up farming, the impression of the general reading public is even more strengthened that the path of the agriculturist is one of roses than any that could be obtained from the general press, and thus the case against the farmer strengthened. Still, the farm journals of our Dominion are doing a world of good, in fact, about all they can to improve the condition of the farmer. Just an instance, however, to show the unfairness of the general newspapers. Last winter a nasty, surlous attack on the farmer was made in a long article in one of our dailies by a returned soldier who evidently considered that the parade of the letters V.C. after his signature gave him sufficient prestige to abuse the class which had probably done as much to win the war as he had. I wrote an answer to the attack, not in the same abusive manner, but trying to show reasonably that the farmer was not the selfish, cowardly, ignorant, unpatriotic profiteer the V. C. painted him. My answer was never published. I have written articles to newspapers and farm journals showing the necessity of farmers freeing themselves from the bondage of party and the political machine if they ever expected to get a square deal from our legislatures, but in many cases these have been rejected, though other articles of an "all's-well" nature have generally found acceptance.

No, the farmer is not getting a "square deal" from the general reading public. He is without the sympathy of the consumer because he is constantly misrepresented in the press; generally through ignorance of his real position, sometimes through misdirected zeal and optimism of the organs of his profession. Even when his abuses are aired in these media they only circulate among his own class, and do little to lessen the curses of his enemies.

He is not getting a square deal educationally. Why? Because he has not the time nor means to get it.

The laborers of Nova Scotia at a general conference at the capital recently decided on an eight-hour day for labor in the province, and it will not be long before it will fall to six hours. Are they to be blamed? Are they to be considered as commodities to increase the wealth of the nation, or as men and women with the right of some hours out of the twenty-four for self-improvement and culture as well as they whom they serve? And yet if the farmers of the world worked an eight-hour day for the next two years the world would be nearer starvation than it is to-day or ever has been. Hundreds of thousands of farm boys leaving school at 12 to 14 years of age, having a very meagre knowledge of the three R's, to help out the income on the farm in an endeavor to make both ends meet at

the end of the year. No time afterward to gain more education because of the incessant grind necessary to keep down debt. Millions of farmers and farmer's wives the world over working 12, 14 and even 16 hours a day the greater part of their lives, too tired even if they had time at night to read the whole of the newspaper.

I do not mean the 10 per cent. who, by one means or another, have reached "easy street," but the 90 per cent. who are scarcely ever heard of outside of their own community, and who produce the world's food at a loss to themselves in the things that make life worth living. No, because the farmer cannot control the price of the product of his labor, and because that price made minimum by organized business, he must spend longer hours each day in order to keep afloat and sacrifice educational advantages within the reach of those who are, in many ways, beneath him. What is more, he cannot afford good schools. Over 80 per cent. of those leaving the country for the city do so because of their desire for better school and church privileges.

He is not getting a square deal socially. This is in part due to his want of education, in part to his isolation, in part due to want of time and partly to ridicule and good-natured contempt which public opinion has built up for him, and part to the fact that he is generally too tired to put forth the necessary effort to meet his neighbors socially. True, we could have compulsory attendance at school up to sixteen or eighteen years, but this cannot be made practical until better conditions surround agriculture, for if farm boys were kept at school under present conditions until they had reached the above ages, the country would be in want.

Again, many farmers live a distance from friends they want to meet, and the effort necessary to get ready, cover this distance, often over bad country roads and not always in pleasant weather, is generally, especially after a long day's work, too great to be undertaken; and when the average farmer does go into public life, the opinion that he belongs to an uncultured, ignorant class and fit only to produce food leads to his being ignored, until he draws within himself and stays home.

He is not getting a square deal industrially. To make as much clear money per day as the average skilled laborer (I am not speaking now of the farm laborer) who works eight hours per day, the average farmer would have to work sixteen hours. This is not guess work. I can prove it from figures taken from the report of the Country Life Commission, that is if the laborer calls eight hours a day then the average farmer has to work 600 days in a year to gain a living equal to that of the laborer; and not only that, but he, in many cases, drags his wife and family through the same experience. He is almost the only man on earth who has absolutely no control over the price of his labor, but is merely a plaything on the sea of commercial and political life.

He is not getting a square deal commercially. A market controlled by interests inimical or indifferent to his sets the price of his produce regardless of what it costs. And not only this, but everything he buys has been enhanced in cost by every means in the power of the middlemen and transportation companies between him and the manufacturer.

He is not getting a square deal politically. A cabinet minister told me not long ago in the course of a discussion similar to the above that the farmer was the "easiest" man the politician had to handle. They could be cajoled, hoodwinked and put off easier than any other class of voter. They were always the last to be helped by the Government, and the first to be depended on to vote the straight party ticket in time of election.

Now why is not the farmer getting a square deal? Because he is an individual. A small committee of men came into the presence of Lloyd-George recently and told him of a few decisions arrived at and made a few demands. Although he felt that the issue might mean civil war he felt, too, that the demands of these few men would have to be approximately met. Why? Because these men had a solid wall of a million workers back of them.

There are a lot of tuppence ha'penny farmers' organizations scattered over Canada of, perhaps, slight benefit from an educational point of view, but almost absolutely worthless when it comes to a question of influence in making legislation. I have served several years on the legislative committee of our Provincial Farmers' Association, and have, time and again, brought before the legitimate resolutions looking to improved laws of undoubted benefit to the agricultural industry, only to have them overruled by political trickery and opposing stronger interest.

No, the farmers have no organization to look after their legislative interests provincially or federally, and until they have the farmer will occupy the meanest place in the national economy.

In a subsequent article I mention some of the steps necessary to place the farmer where he should be. Annapolis Co., N. S. R. J. MESSINGER.

Improper hitching of tractor to implement frequently causes trouble for which the tractor implement receives the blame. It has been found by dynamometer tests that a hitch causing unnecessary side draft will increase the load as much as one-third. This increases fuel consumption and makes the tractor appear to have a higher operating cost than it really has. The greatest disadvantage, however, is in quality of work done. A poor hitch causes ragged furrows, poor pulverization and failure to turn over the furrow slice properly. Sometimes correcting the hitch will get rid of difficulty in getting the plow to scour.

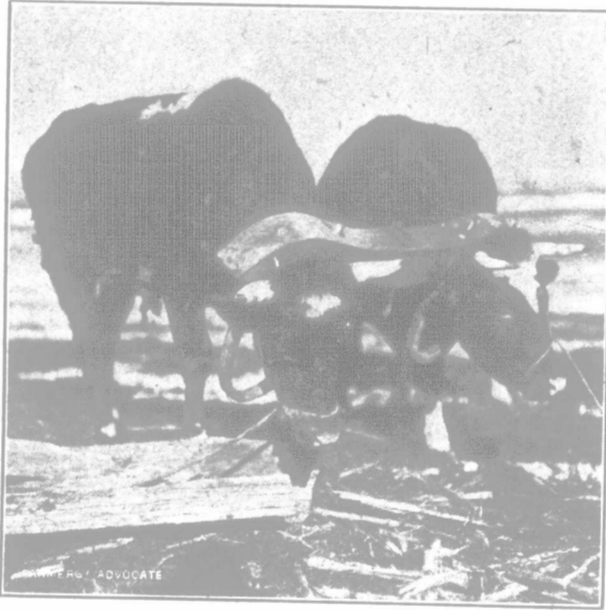
CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

How Can We Keep Our Young People on the Farm?

EDITOR "THE FARMER'S ADVOCATE":

This surely is an age of rapid changes, so rapid that one can scarcely keep himself adjusted to them. Years ago our parents made their home in the heart of the forest, reared large families, who in turn made their homes likewise not far from the parental roof. But until their nest-building began they never thought of leaving home. This condition gradually changed, as the country became more settled and then, by the time father and mother had reared their family to ages of usefulness and companionship, they found themselves finishing their life as they had begun—alone. One child had a position here, another a profession somewhere else. Then came the worst war of all ages, and with the flower of this generation's manhood the world has paid the price.

To-day we find ourselves with children in our home who very soon will be our young men and women. Are they going to slip away from us, for the lure of the city, as they have been doing? Surely we can do something to make our country home and community life sufficiently attractive that they cannot leave without sorrow at least. We must take time by the forelock. Children love to be busy, and their activities may as easily be guided along useful channels as otherwise. Very young children feel the importance of responsibility and as soon as they are old enough to be trusted with small tasks, give them something of their very own—a lamb, pig, hen—anything that will hold them responsible, the proceeds of which may be banked and used for their personal expenditures. It is surprising how observant they become in caring for stock. They also should learn to live within their means.



Steer-breaking was, at one time, a pleasant and profitable pastime.

Outside of the home life, the school is the next important factor. Late years the study of agriculture has been introduced, but so far is in its primeval stage, the over-crowded curriculum not allowing for a systematic study. Before it is successful, the study and experiments, that take place at school, must be of community interest, as the study of the soil, various fertilizers, crops most suited to that district, and the introduction of new varieties tested in school plots. Pupils who have been successfully interested will make the most of acreage, time and material.

So far, farm people have been working against their own interests, in this respect. Many have jeeringly remarked that they are sending their children to school to learn the essentials—reading, writing and arithmetic,—and these modern frills that are being wedged in, that should teach them to get more out of life, are looked upon as tomfoolery.

So much for the early home and school life. In a great many farm houses and barns you still find as many conveniences as they had a hundred years ago. A case where the "old folk" haven't advanced with the times. Most of the modern conveniences are time and labor-savers and certainly add to the comfort of the farmer's family and stock, so it is mistaken economy to be without them.

When the barns are modernly equipped, it is no more work to keep well-bred stock than scrubs, and it is more satisfaction to work among them or to show them to visitors or buyers.

In this day of time and labor-saving machinery and methods, it is necessary for farmers to slave from 5 a.m. until bed-time, six days out of the week, with a lot of necessary chores on the blessed seventh? No wonder young farmer folk look with longing eyes on the city young people who are free after six p.m. and all of Sundays. In rush seasons there are exceptions, when we must work late and early, and interested youth will make allowances for these exceptions; but aside from these let us stop long enough to enjoy life as we go.

You say "Satan finds some mischief still for idle hands to do." Oh! Is that why the hours must be labor filled? I should hope not. We are naturally social beings. It is our pleasant, social intercourse with each other that lifts us above sordid things and makes us broader and more sympathetic. The young, however, crave amusement. If they do not find it at home, they hie away to town, where the pool room, theatre, etc., beckon. In themselves these may not be so objectionable, but they often lead to objectionable associations.

It is the long winter evenings that we must make attractive, so that our developing manhood and womanhood will find country life really worth while. In our district a literary society has proved most satisfactory. It adhered rigidly to the constitution. A debate was put on each week besides other numbers, and some subjects kept one busy a whole week gathering information and data.

Outside amusements, although important, are by no means a sole requirement in keeping our young people happy. Blessed, indeed is the man or woman who looks back on early life in a home where good books, inspiring conversation, music, good pictures and good fellowship abounded.

Elgin Co., Ont.

FARMER'S WIFE.

Some Reasons Why the Boys Leave the Farm.

EDITOR "THE FARMER'S ADVOCATE":

We hear many reasons given for the boys leaving the farm. Sometimes the Government is expected to help stem the tide of rural depopulation, but in the writer's opinion each farmer must work out his own salvation in keeping his sons on the farm. Farm work must be made attractive in some way or the boys will not stay. In looking over the country, we see the boys brought up under good and profitable farming conditions, raising proper crops and good stock staying on the farm, while those on unprofitable farms, with poor crops and poor stock move to the city. This goes to show that the average boy does not leave the farm because he is afraid of hard work and good pay, but because he is afraid of hard work and no pay.

Sometimes we hear of the boys leaving the farm because they get no chance to make anything for themselves but all goes into the parental pocketbook. This is too often the case, but with a farm growing good crops and good live stock, there is something wrong either with the work or the management if a young man cannot get as much at home as he can get from his neighbors. Again, other boys become dissatisfied because of lack of labor-saving conveniences, both on the farm and in the home. Their chores are twice as hard to do as their neighbor's, and they see their mother working under endless difficulties that a small investment would remove. Still other boys are trained from childhood by their mother to be dissatisfied with the farm. They are told about the hard work and disagreeable conditions on the farm and of course, conclude that the sun always shines in the city.

The writer tried a plan with a little brother that might have worked out all right had it not been for the war. As it was he answered his country's call and is among those who are not coming back. At about eleven years of age he was allowed a hen that layed an egg of a different color from the rest and from that was to get a horse. When he sold enough eggs to pay for it he bought a little pig. At seven months old he sold the pig and bought a calf. Two years later his calf was a good steer and he sold it and bought a colt. In this way a boy's interest is centered on all the different lines of stock and his remuneration increases as he becomes more useful.

Grey Co., Ont.

WM. MATHER.

A Partnership on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

In the issue of March 27 you ask a question re "Father and Son in Partnership." I can't say that I know of a plan that has worked satisfactorily, but I cannot see the difference in father and son being partners than any other two men, unless it would be in their ages, for an old and a young man's ideas of working and living are very often quite different, causing disagreement and, therefore, making partnership an unsatisfactory ship to sail in.

If it is the wish of father and son to become partners, why not take an inventory of stock and implements, sell the son half interest, divide the profits equally, and let the son pay the father a certain sum each year until he has his half of stock and implements paid for? I think I am safe in saying that in the majority of cases all the son asks of the father is a "chance," but the father very often misinterprets the son and thinks he is asking for the farm.

Welland Co., Ont.

D. H. H.

Young farmers can lend considerable strength to the young farmers' movement by writing letters to this department telling what their association is doing and offering suggestions to others. Do not allow your organization to lapse during the summer. Maintain interest by engaging in some community work, excursions, games and experiments.

AUTO AN

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Prior to the tractor there v ratings. While were all under It seems that over-rated, and for actual work instances it is get the tractors particular and power lost in t being omitted. highly desirable on a rational, u be accurate an not different at would profit by practice of over the fact in case companies wou policy that cou for many of ou We will sup market for a carefully; he ha of various tract one is the righ several of the garding four m him.

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A 10-18
B 10-18
C 10-20
D 10-20

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Take Tractor A

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AUTOMOBILES, FARM MOTORS AND FARM MACHINERY.

To remove the broken handle end from a hatchet or axe head lay the hatchet or axe in the oven for fifteen minutes to an hour, depending upon the heat of the oven, and the broken handle will almost drop out.

If the car owner should have occasion to dismantle the springs he should take the opportunity to spread a lubricant over the leaves. A good one is a mixture of paraffin and flake graphite. The wax may be had by melting a few ordinary candles and when in the molten condition the graphite is thrown in and the whole stirred.

If there was some putty left after putting in that window pane it can be saved by wrapping it in tough brown paper and placing it in a fruit jar or covered can filled with water. A tight cover is essential for whatever container is used to prevent the evaporation of the water. Putty can be kept soft and pliable indefinitely in this way, and will be ready for use when needed.

In making an ordinary connection to a battery terminal the stripped end of the wire should be wound around the binding post in a clockwise direction. When the screw is tightened it will be turned to the right and with the wire wound in the same direction there is a tendency for it to wrap all the tighter around the post. When the wire is wrapped the other way around it tends to unwrap when the screw is tightened.

No one cares to think much about being towed home, but not to make a bad matter worse, some thought should be given this subject. In attaching the rope which is to be used in the towing, many drivers fasten it to the axle, which is wrong. The rope should be fastened to one of the front portions of the frame, so that the pull comes on the chassis. The same thing applies to the car doing the towing, except that the rope should be fastened to some part of the rear frame.

Tractor Ratings.

Prior to the introduction of the gasoline or kerosene tractor there was not much confusion about tractor ratings. While steam engines were under-rated, they were all under-rated in about the same proportion. It seems that gas tractors have been, in many cases, over-rated, and cannot develop their advertised capacity for actual work on the belt or at the drawbar. In some instances it is due to the fact that tractor companies get the tractors from a plant making a specialty of this particular and vital part. Due consideration of the power lost in transmission to the belt or the drawbar being omitted. From the farmer's standpoint it is highly desirable that tractor ratings should be placed on a rational, uniform and national basis, which would be accurate and acceptable from coast to coast, and not different at every median line. The tractor interests would profit by conservative and uniform ratings. The practice of over-rating is short-sighted. We emphasize the fact in case there may be doubters, that the reliable companies would be glad to fall in line and adopt any policy that could be mutually arranged. A solution for many of our present troubles is offered in the remainder of this discussion.

We will suppose that a practical farmer is in the market for a tractor. He has studied the problem carefully; he has looked through a list of specifications of various tractors in a vain endeavor to decide which one is the right machine for him. We present below several of the specifications he may have selected regarding four makes that may appeal most strongly to him.

Rating	Plows Recommended	Pounds Pull at Drawbar	Speed Miles per Hour	Drawbar H.-P. they should Develop from Figures Given
A 10-18	2	900	2 3/4	6 2-5
B 10-18	2	1,800	2 1/2	11 1-5
C 10-20	3	1,800	2 1/2	12
D 10-20	3	2,650	2	14 2-15

The first two in the above list are in a class of 10-18 (meaning 10 horse-power at the drawbar and 18 at the belt), the last two are in a class of 10-20 engines. However, all four are advertised as 10 horse-power machines at the drawbar, and they are all in one class. Let us examine each, and from the data given in their respective cases see what can be developed. We know that the drawbar horse-power equals the pull in pounds multiplied by the distance travelled in feet per minute, and the product of these two factors divided by 33,000 (the number of foot pounds of work per minute in one horse-power.) Stating it briefly we have:

$$\text{Drawbar Horse-power} = \frac{\text{Pull in pounds} \times \text{Distance in feet per minute}}{33,000 \text{ (one horse-power)}}$$

Take Tractor A in the list and work it out and you will find that:

$$\frac{900 \text{ (Pull in pounds)} \times 242 \text{ (2 3/4 miles per hour = 242 feet per minute)}}{33,000} = \frac{66}{10} \text{ or } 3 \frac{3}{5} \text{ Drawbar Horse-power.}$$

and it is rated as 10 drawbar horse-power. We have taken the advertised specifications. Something is wrong.

Now if you will examine B, C and D, in exactly the same way you will find that they respectively are able to develop 11 1-5; 12; and 14 2-5 drawbar horse-power. In every instance they exceed their rating and, therefore, may be reasonably expected to give satisfaction.

If that does not mean chaos and confusion I would like to know what it does mean to the average man. You say: "Well, what are you going to do about it?" We would respectfully suggest that since tractors have been and are being sold in large number in this country, that some uniform method of rating be adopted in the interests of the reliable manufacturer as well as the interests of the farmer.

You may wonder why we include the manufacturer. They are willing and anxious to co-operate, and one need go no further than the record attendances at their instruction schools to realize this is true. Every province should provide equipment for testing tractors on the belt and at the drawbar. The majority probably have the necessary equipment now in the Agricultural engineering departments of the agricultural colleges. The law governing the sale of tractors would demand that every type and every make of tractor be tested, and if the results of the test showed that it came up to its rating then a stamp of approval or guarantee, call it what you like, would be attached to all contracts involving the sale of the said type and size tractor. The plan is simple and would work as follows: The John Jones Company would notify the testing bureau that they wanted their 10-20 tractor tested. A qualified official would go down to the warehouse or car, select any engine at random, noting its serial number. The tractor would then be submitted for trial and approved or rejected as the case might be. In a test of this kind tractor A in our list would receive no stamp of approval and would be placed in a class designating it as 6 D.B. H.P., and why not? The other three machines, B, C, D, would pass and go in the market as approved, government inspected 10-20 tractors. All other sizes would be dealt with in a similar way. Provincial laws would have to be uniform; in fact, there should be one rating for Canada or even North America. A company making an engine that could not come up to the standard would have two roads open to it: the first to improve their machine, and second "to shuffle off this mortal coil." Much more might be written about the tests, but enough has been said for the present, and there seems to be no reason why the details cannot be arranged to the mutual benefit of all. Something should be done.

How many plows will the engine pull? You might just as well ask how long will it last? No matter how conscientious we are we cannot answer your question unless we know the soil conditions, etc. The solution in this case is to have the country charted according to the different kinds of soils. A 14-inch plow may require a pull of 200 to 1,600 pounds, depending upon the soil conditions.

Plowing matches are held at many different places, and they offer an opportunity for testing the pull required by the plows. County agents could take the question into account in their Rural Survey work—it can be done. Then we would know when a man writes in from a certain district that since the average drawbar pull in breaking in that district is 700 pounds, that he could with any 10 D.B. H.-P. tractor in the list above, except the first, handle two 14-inch plows with reasonable hope of success. There would be no hit or miss. There certainly would be fewer misses than we have under the present system.

The remarks of a recent writer on the tractor situation in the United States are very good: "There is no such thing as a best tractor any more than there is the best breed of hogs, or the best breed of cattle, or the best breed of dogs. The reason is perfectly obvious when one stops to ponder. If there were such things as a standard soil, a standard climate, a standard topography and a standard type of operator, then we might be able to develop a standard best kind of tractor. Moreover, one man takes a certain make of machine and does well. He is pleased with his results. Another man buys exactly the same make of machine, works it on a similar farm and makes a flat failure. Where should the blame or credit be applied, to the man or to the machine? In the case of failure we may blame the machine, but if we do, then we should also credit the success to the machine. Obviously, however, both the success and the failure were due to a combination of man and tractor. One may take his choice, but the evidence piles up that some men never fit into a machine combination."

In conclusion, let us say that the scrub tractor should follow the scrub bull or the scrub stallion out of the country. They have been tested and turned down by an examining board because they did not come up to the approved standard. Therefore, let us have all makes that are offered for sale tested and approved.

Let us buy from reliable companies who are in a position to render expert and repair services, and whose

tractors have proved their ability to do what is claimed for them. We look forward to such a step being taken as we have outlined, and feel sure that it would be a long step in the right direction. It would be the means of avoiding many disputes, and there would be more satisfied owners—although we have a large number at the present time. Plowing is "the peak load in our agricultural work," and we need good machinery to carry this load.—J. MACGREGOR SMITH, University of Saskatchewan.

THE DAIRY.

Dairy School Examination Results at O. A. C.

The attendance at the various courses in dairying during the past winter at the O. A. C., Guelph, has been good—nearly up to pre-war numbers. The number registered was: 43 in Factory Courses; 7, Farm Dairy; 30, Cow-testing; 14, Ice-cream and Soft Cheese Making—a total of 94.

The following is the proficiency list of the Factory Course: 1, W. Colwell; 2, H. Smallfield; 3, A. P. Clark; 4, L. Luther; 5, H. Whillans; 6, E. Culham; 7, J. Usher; 8, G. Chamberlain; 9, G. Whiteside; 10, N. Orth; 11, Miss H. Summers; 12, A. Prosser; 13, H. S. Howse; 14, D. Beattie; 15, W. Lennox; 16, Wm. Pappa; 17, W. W. MacKenzie; 18, R. Cunningham; 19, H. Dalley; 20, A. Todd; 21, D. Miller; 22, A. Cunningham; 23, L. Shoemaker; 24, H. Orr; 25, E. Webb; 26, R. MacNabb; 27, Miss E. Dobson; 28, R. Waugh; 29, O. S. Auger; 30, V. A. Stewart; 31, F. E. Gray; 32, D. Richardson; 33, A. Robidoux; (1) 34, M. Yankoo; (2) 35, L. Rubinoff; (3) 36, R. R. Roy.

NOTE—1, 2, and 3, will be required to pass supplemental examination in Chemistry and Bacteriology.

The class in Cow-testing was one of the largest and most enthusiastic ever held at the College, indicating the great interest shown by cow-owners in this branch of dairying. The Dairy Department of the College has been unable to supply the demand for supervisors of Official Tests during the past winter, even though a staff of about forty men has been employed. The class which has just completed the Course will relieve the strain for the present.

The following is the proficiency list for Cow-testers: 1, Wm. Miles; 2, Fred Schell; 3, A. J. Graham; 4, F. R. Shore; 5, W. B. Silcox; 6, M. Davis; 7, E. L. Tuttle; 8, S. E. Keillor; 9, J. E. Shaver; 10, L. Garratt; 10, A. Minto; 12, W. L. Thompson; 13, R. J. Bain; 14, R. Barrigar; 14, H. G. Cossett; 14, L. Lossing; 17, G. A. Ficht; 17, W. Wardell; 19, A. Barratt; 20, S. R. Ficht; 21, M. Austin; 22, M. Disher; 22, Jas. Wood; 24, W. Lennox; 25, A. V. Hunter; 26, B. Cox; 27, J. Snyder; 28, S. Rivers.

Through the kindness of friends of the Dairy School cash prizes to the value of \$125 were offered to competitors. The winners were:

JUDGING AYRSHIRE CATTLE: 1, H. Orr, Ramsyville; 2, R. Waugh, Moosejaw, Sask.; 3, A. Todd, Brantford. JUDGING HOLSTEINS: 1, H. Whillans, Hurdman's Bridge; 2, F. E. Gray, Laurel; 3, Geo. Whiteside, Guelph. JUDGING JERSEYS: 1, R. Cunningham, Tara; 2, H. Smallfield, Renfrew; 3, D. Richardson, Hartshorn, Alta. MAKING CHEDDAR CHEESE: 1, H. Dalley, Simcoe; 2, A. P. Clark, Tregaria, Sask. MAKING BUTTER: 1, W. Colwell, Parkhill; 2, D. Beattie, Seaforth. PASTEURIZING AND BOTTLING MILK: Miss H. Summers, Winchester, and A. Todd, Brantford, equal; 2, E. Culham, Sheffield. PROFICIENCY: 1, W. Colwell; 2, H. Smallfield; 3, A. P. Clark.

Griffith Sale of Holsteins.

Considering there were very few officially tested cows selling in J. E. Griffiths dispersion sale of Holsteins at Weston, Ontario, on April 3, the receipts obtained were pleasing. Of the 23 head catalogued almost a dozen were still under breeding age and this of course, was instrumental in keeping the general average down. Thirteen lots, however, in the sale sold above three figures and made an average of \$191. The herd bull Emery Jewel Hengerveld, fetched \$200. There were a number of choice grade Holsteins sold directly after the pure-breds and these sold exceptionally well. The lots selling for \$100 and over were as follows The names of the buyers in each case are also given:

Emery Jewel Hengerveld, L. McEwen, Weston.....	\$200.00
Korndyke Paul Schuiling, Jno. McHuchon, Kleinburg.....	137.50
Olive Schuiling Posch, M. A. Ramsay, Sharon.....	240.00
Snowdrop Hengerveld Schuiling, C. Usher, Edgeley.....	142.50
Princess of Weston, H. Banard, Downsview.....	182.50
Nora Calamity De Kol, J. J. Fox, Guelph.....	200.00
Baroness Suirk, E. H. Anderson, Weston.....	200.00
Daisy Calamity Suirk, E. H. Anderson.....	270.00
Beauty Princess Hengerveld, F. W. Pearson, Weston.....	167.50
Abbekerk Pietertje Clothilde, M. A. Ramsay.....	200.00
Nellie De Kol Suirk, J. J. Fox.....	192.50
Polly De Kol Suirk, J. J. Fox.....	215.00
Violet Hengerveld Sylvia, F. A. Pearson.....	140.00

Eighty-one Holsteins Average \$221 at Belleville.

The ninth annual Belleville District Holstein Breeders' sale held in the city of Belleville, on Wednesday, April 2, proved once more a complete success. Of the ninety-four lots catalogued there were upwards of twenty head that should never have been accepted by the Club, but the remaining numbers were all good material, well bred and well brought out. The proceeds of the day totalled \$19,035. Thirteen calves sold below the \$100 mark, and the remaining eighty-one animals made the splendid average of \$221. The sixty-one females averaged \$228.50, and the twenty young males made a general average of \$197.75. The consignment of E. B. Purteile, of Bloomfield, made the highest average of the day. The five head averaged \$618.90. An eleven-months-old son of Champion Echo Sylvia Pontiac, from a non-tested daughter of King Segis Alcartra Spofford, brought Mr. Purteile \$1,060, the top price for the day. Sylvia Alcartra Posch, a three-year-old heifer from the same herd, made the top for females at \$925. This heifer was also a non-tested daughter of King Segis Alcartra Spofford. Among the consignors were F. Hillman, C. Baker, L. Parr, E. C. Chapman, J. A. Caskey, J. E. Huff & Son, B. Mallory, A. E. Phillips, G. D. Wright, E. T. Fritz, S. F. Parks, A. Parks, E. E. Redner, F. Denyes, E. B. Purteile, P. Cave, Nelson Bros., B. E. Hagerman, W. A. Hubbs, C. Mallory, B. Hoskin, and W. F. Fallis. The sale was managed by J. A. Caskey, with N. Montgomery as auctioneer. Following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

Females.

Clara Pontiac Keyes, Herman Pyne, Elgin.....	\$ 150
Regina De Kol Victoria, Percy Mott, Belleville.....	155
Lady Hermes Eclipse, W. J. Hubbs, Rednersville.....	170
Miss Laura De Kol, Jas. W. Campbell, Holloway.....	165
Princess Trimonia Belle, M. Shea, Stirling.....	105
Patti Bell De Kol, R. M. Holtby, Port Perry.....	530
Isabell May Burke, Jas. Harry, Trenton.....	150
Queen Isabelle De Kol, J. T. O'Connell, Peterboro.....	260
May Darkness Echo, S. Elliott, Kingston.....	315
Keyes Segis Walker Pietertje 3rd, A. W. Churchill, Gananoque.....	250
Flora Bell De Kol Daisy, S. N. Fluke, Foxboro.....	180
Floral Hill Jennie Keyes, Peter Van Allen, Foxboro.....	250
Dolly Hengerveld De Kol, S. Elliott.....	180
Flossie Korndyke Hengerveld, J. T. O'Connell.....	210
Triumph Mercena Hengerveld, Peter Van Allen.....	235
Lady May Pontiac, Geo. Johnston, Napanee.....	135
Pontiac Lady Sylvia, S. J. Martin, Picton.....	110
Una Pietertje Hermes, S. J. Martin.....	150
Gooda Plus Wayne, H. B. Pyne.....	130
Echo De Kol's Twin, J. T. O'Connell.....	225
Laura Echo Keyes, J. Harry.....	125
Nellie Posch Pietertje, B. L. Redner, Rednersville.....	130
De Kol Houwtje Ormsby, Geo. W. Kingsley.....	255
March Ormsby De Kol, W. E. McKillican, Maxville.....	270
Pontiac Ormsby Maid, B. Perry, Wooler.....	200
Katie Segis Houwtje, C. Hall, Latta.....	150
Francy Spofford Ormsby, W. E. Wood, Bloomfield.....	220
O. U. Johanna Pietertje, J. T. O'Connell.....	210
Burke Bos De Kol, E. Purteile, Bloomfield.....	380
Geraldine Buster, H. Fitzgerald, Belleville.....	160
Katie Ormsby, C. R. W. Proctor, Brighton.....	115
Flossie Burke De Kol, E. Miller, Picton.....	140
May Segis Korndyke, J. W. Harrington, Brighton.....	160
Echo Pauline Sylvia 2nd, J. L. Hennessy, Codrington.....	500
Hengerveld Flake De Kol, W. E. McKillican.....	155
Lucy De Kol Favorit, J. N. Currison, Brantford.....	100
Rose Echo Segis, S. Ross, Brighton.....	500
Daisy Segis Alcartra, W. F. Osborne, Rossmore.....	410
Sylvia Alcartra Posch, G. H. Wilmont, Kingston.....	925
Countess Inka Walker, P. S. Van Vlack, Napanee.....	200
De Kol Girl Pietertje, M. R. Anderson, Belleville.....	200
Countess Lena De Kol, J. T. O'Connell.....	300
Ada Walker Pietertje, Ed. Miller.....	240
Korndyke Lazy Girl, H. Smith, Frankford.....	225
Pontiac Beauty Segis, J. Vipond, Cumming's Bridge.....	250
Daisy Pietertje Korndyke 2nd, Geo. Kingston, Stirling.....	275
Bessie Pietertje Korndyke, Geo. Kingston.....	205
Beauty De Kol Pietertje, Geo. Burnside, Madoc.....	205
Ivy De Kol Hengerveld, Geo. Kingston.....	205
Mollie Pietertje Hengerveld, D. B. Tracy, Cobourg.....	425
Rose Beets, H. Thompson, Napanee.....	205
Nellie Beets Posch, Peter Van Allen.....	175
Helena Butter Girl Keyes, A. W. Kingston, Stirling.....	275
Helena May Butter Girl, J. Vipond & Son.....	325
Fremona 2nd, A. W. Churchill.....	250
Flora De Kol Isosco, S. N. Fluke.....	230
Gypsie De Kol Queen, E. Osborne.....	130
Pontiac Echo Queen, F. R. Mallory, Frankford.....	100
Pontiac Mol Echo, F. R. Mallory.....	100
Lulu Posch Calamity, Clarence Vermilyea, Belleville.....	170

Males.

Brighton King Alcartra, R. M. Holtby.....	225
Admiral Beets Posch, A. Moor, Plainfield.....	125
Glenhurst King Keyes, H. Pyne.....	120
Glenhurst Walker Keyes, M. Shea.....	140
Count Aaggie de Floral, G. H. Wilmont, Kingston.....	285
Bull, E. J. Phillips, Belleville.....	170
Bull, Peter Goldsmith, Belleville.....	110
Lee De Kol Alcartra, C. Tucker, Harold.....	140
Bull, H. B. Pyne.....	120
Count Johanna Paul, J. Rainie, Harold.....	150
Baron Segis Korndyke, F. S. Parrott, Belleville.....	225
Peter De Kol Korndyke, A. W. Anderson, Belleville.....	110
Sir Echo Alcartra, W. W. Dracup, Harold.....	1,060
Segis Alcartra Pietertje, H. Chambers, Napanee.....	145
King Korndyke Pontiac, W. A. Hubbs, Bloomfield.....	165
Count Hengerveld Pontiac, H. Garrison, Holloway.....	130
Sir Keyes Clyde, W. E. Hartlett, Foxboro.....	115
Pontiac Echo Lad, D. Scott, Belleville.....	155
Content Paul Calamity, Wm. Clark, Belleville.....	110
Nigger Vale, W. H. Hodgen, Latta.....	120
Paul Vale, D. Anderson, Frankford.....	130

The Menie District Ayrshire Sale.

On Thursday, April 3, the Menie District Ayrshire Breeders' Club held a sale of Ayrshire cattle of different ages at Campbellford, when twenty-five head went under the hammer. The class of stock consigned to the sale was by no means a credit to the breed. The animals were very poorly fitted and consequently did not bring very high prices. Had the breeders been more liberal with the feed and put their cattle in condition, the average price at which the animals sold would have been greatly increased. As it was, some two- and three-year-old cows went considerably under the \$100 mark. In fact, from \$60 to \$90 was the ruling price for the young stuff. A glance through the catalogue showed that the animals were well bred, such breeding as Hillside, Peter Pan, Springbank Monarch, Springhill Cashier, etc., being represented. Hunter Bros., of Grimsby, purchased many of the good milking cows. The sale totalled \$4,335. The top-priced animal was Oakland Belleflower, an eight-year-old cow, which went to the \$315 bid of Hunter Bros. This cow is about due to freshen to Springbank Monarch. As a junior two-year-old she qualified in the R.O.P. with 9,000 lbs. milk. Following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

Hover-a-Blink, W. L. Tummon, Crookston.....	\$150
Woodland Queen, J. B. Ferris, Campbellford.....	155
Oakland Juno Wm. Paul, Peterboro.....	200
Peter, Louis Locke, Campbellford.....	120
Oakland Kirsty, Hunter Bros., Grimsby.....	155
Lena 2nd, W. E. Mason, Port Hope.....	155
Daisy 3rd, Hunter Bros.....	200
Oakland Kate, Hunter Bros.....	135
Potter's White Rose 2nd, A. L. Riendeau, Campbellford.....	100
Sarah 2nd, Geo. McComb, Campbellford.....	135
Highland Belle, Hunter Bros.....	200
Oakland Belleflower, Hunter Bros.....	315
Humeshaugh Snowdrop 2nd, A. E. McCook, Campbellford.....	115
Humeshaugh Snowball 3rd, Dr. A. J. Fyle, Ameliasburg.....	115
Woodland Ruby, W. Stewart, Campbellford.....	160
Potter's White Mary, A. L. Riendeau.....	210

The City Milk Supply.

Dairymen supplying the cities with milk are often times unjustly criticized by their customers who do not understand the problems which have to be contended with in producing and delivering to the city man's door a quart of milk. It is easy to find fault if the milk looks a little blue, or is somewhat thinner than the consumer would like. Delivering tainted milk, or milk with a little sediment in the bottom of the bottle, are unpardonable sins of omission. No dairyman will intentionally sell tainted or dirty milk. Accidents will happen in the best regulated dairies, and it is not an unknown occurrence for contamination to take place after the milk has been left on the doorstep. Before undue criticism is made, the facts and circumstances should be investigated. Provincial and city authorities have enacted laws governing the quality of the dairy products offered to the public. However, in passing judgment on individual offenders of the law justice has not always been tempered with mercy, especially in cases of a dairyman's first offence with milk not quite up to the standard.

In some cities it is customary to convict a dairyman on the result of testing one sample of milk. There is a possibility of error with the most careful testing; consequently, in justice to the milk producer three samples should be taken and one tested by the other by the owner, and the third by a disinterested party. Then, too, sampling one milking is not altogether fair, as circumstances over which the producer has no control may arise to lower the test of a certain milking. A composite sample would give a much fairer idea of the quality of milk being delivered. Milker producers' associations might advisedly take this matter up in order that justice be done to their members. Possibly the greatest complaint is of milk being low in fat. The quality is usually judged by the depth of cream on the top of the bottle. However, the visible cream is not a true indication of quality, as there will be less on a bottle of new milk than on milk twelve hours old. The Babcock test and a lactometer reading are reliable means of ascertaining the quality of milk and cream and of finding out whether or not the milk has been watered. The two should be used together. Because the milk tests low is no indication that water has been added to the lactic fluid. Consumers should disabuse their minds of the idea that blue-looking milk is the result of the pump being handy to the milk can. The individuality and breed of the herd influences the test. A cow giving a large flow of milk is not as likely to test as high as one giving a more moderate flow. However, there are very few herds to-day that test below the standard set by the cities. It is quite possible for the test to vary according to the number of fresh cows in the herd, and also there might be a slight variation occasionally due to cows being frightened or to physiological conditions. On this account it would be much fairer, and more accurate information regarding the quality of milk which dairymen are delivering would be ascertained, if a number of samples were tested rather than convicting on the results of a single sample.

It is important from a health standpoint that the milk be clean and pure. Disease epidemics have in times past resulted from contaminated milk. The present rules governing the milk supply of the city are fairly strict and are adhered to by the dairymen. Every precaution is taken to supply the customers with milk of good quality, both from the standpoint of cleanliness and of butter-fat content. It is more difficult to keep the milk sweet during the summer than in the winter and this difficulty may be accentuated this year owing to lack of ice. Such things as wiping the flank and udder with a damp cloth, straining the milk through several thicknesses of cheesecloth, then removing the lactic fluid from the stable as soon as drawn and cooling it in a non-contaminated atmosphere are practices which should be followed on every dairy. If these things are done a sediment test would show the milk to be almost if not quite free from dirt, and there would be an absence of any taint.

There is a good deal of work entailed in producing clean milk, of which the average city person know little about. The same is true in the production of butter and cheese, and the price of the same, while high, is not out of proportion to the price of feed, labor and dairy equipment. Back of the quart of milk, or the pound of butter and cheese, is the cow which, even though she be a grade, commands a high price on the market to-day. The raw material in the form of feed which the cow uses in the manufacture of milk comes high, and must also be reckoned with. The farmer who must in most cases fill the threefold task of being proprietor, manager and laborer, is entitled to as much remuneration as the man who runs a business in town which in many cases does not represent the outlay in capital which the farmer has invested in his farm stock and implements. It is unfortunate that even with the present prices of dairy produce, the man behind the cow does not realize the salary or the dividend which comes to the man in commercial business. Even at sixty-five cents a pound for butter, thirty cents a pound for cheese, and fifteen cents a quart for milk, these products are the cheapest foods which find their way to the city man's table.

The Willowbanks Sale of Holsteins.

Although the country surrounding the town of Dunnville is not particularly noted as a dairy district, indications point to the fact that the Black and Whites are gaining in favor with farmers of that vicinity. On April 5, C. V. Robbins disposed of his registered herd of Holsteins, in the town of Dunnville, at very remunerative prices. Bidding was brisk throughout the entire sale, and the animals were in excellent condition. The twenty-six animals sold, including a number of young calves and aged cows, realized \$4,750.50. The highest price was \$490, paid by Logan Bros., of Dunnville, for the young cow, Pet Lady of Willowbanks, a cow of outstanding quality and with a good record. She was closely followed by Lakeview Almeda Segis, an extremely typey junior four-year-old. She went to the bid of \$450 from John Moote, of Canboro. Dorothy Butter Girl, another young cow, brought \$400. The following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

Elmdale Bess Princess, Lakeview Farm, Bronte.....	\$195
Lyndenwood Favorit Belle, John Moote, Canboro.....	250
Dora Butter Girl, Haist & Ecker, Jordan Sta.....	400
Pet Lady of Willowbanks, Logan Bros., Dunnville.....	490
Lakeview Almeda Segis, John Moote.....	450
Canary Pauline Queen, Logan Bros.....	230
Josie Bewunde Posch, P. S. Moote, Attercliffe.....	130
Lyndenwood Countess, J. Root, Humberstone.....	380
Jewel Mechthilde of Willowbanks, J. Moore, Burnaby.....	205
Lakeview Belle, Lakeview Farm.....	225
Queen Anne Teake Lady, G. Nichols, Dunnville.....	300
Spinks August Daisy, O. Durham, Smithville.....	280
Willowbanks Cassie Korndyke, R. Davis, Burnaby.....	225
Willowbanks Hengerveld Lady, J. Root.....	205
Spinks Butter Boy Walker, Haist & Ecker.....	110

EDITOR "THE F"

A recent qu bound poultry his inability to think that perha trouble in quest readers.

The occurre due to my lack and possibilitie never happened that the accid it.

As my hens a very good pri in my care and them something meal of the day or what authori is in need of sal I do remember th ly salted an extr in its entirety o as I watched t already well-fed I rather comme so large that th not getting a fu large meshes be fowl would app leave the rest. salt made them results, already revealed every l and sick enough deed, two of the help. It was a c

The situatio of no deliberati ever. I simply rush relief. I qu a needle and good sharp raz disinfecting sol operated on al perate cases, th all the ones wh far gone as to be of comatose o To the next lo not quite so b ministered a ta ful of castor- applied massag crop. To the that could drink I gave water with salts and aged the crop. covered all but f

The five t included the t were past help beginning and other three two the lot which w with salts and w one of the lot tr oil. To all appe liquid tended to crop and so finis

All those th on a soft diet to shape of gentia very simple and bird or else hang. Make the inci itself, just suffic finger. Be sure that it will not a portion of th pressure and ma your finger and greatest precauti liquid or solid, g crop. The final openings that yo the outer skin; ea Put about three bird protection f gently stimulati Carleton Co.,

Incubation sl parations well in incubators at w as possible and t to lay in the fa cubation is cont Department of A Prof. W. R. Gra quote in the follo

It is general good hatch, the are not likely to get good hatches

POULTRY.

Crop-bound Poultry.

EDITOR "THE FARMER'S ADVOCATE":

A recent query in your columns in regard to crop-bound poultry in which your correspondent admits his inability to place the cause of the condition makes me think that perhaps the recital of my experience with the trouble in question might be of interest to some of your readers.

The occurrence happened to me four years and was due to my lack of a thorough knowledge of the needs and possibilities of the poultry character. That it never happened again in any degree whatever proves that the accident had a lesson to teach and that I learned it.

As my hens were laying well and I was being paid a very good price for the eggs I was most enthusiastic in my care and feeding. Especially was I keen to give them something warm, grain or mash, for their last meal of the day. I do not remember now from whom, or what authority, I obtained the information that fowl is in need of salt as much as the cow or the horse, but I do remember that the very day that I did so I generously salted an extra large mash and innocently dumped it in its entirety on the poultry feeding boards. Indeed, as I watched the ravenous eagerness with which my already well-fed birds attacked the highly seasoned mess I rather commended myself for having made the mash so large that there was no possibility of the more timorous not getting a full share. I had often given them such large mashes before and no harm had come of it for the fowl would apparently eat just what they wanted and leave the rest. However, this time their appetite for salt made them devour it to the last little bit, with the results, already foreshadowed, that the next morning revealed every hen with an enormously distended crop and sick enough to die within any time whatever. Indeed, two of them were unmistakably past the need of help. It was a calamity.

The situation admitted of no deliberation whatever. I simply had to rush relief. I quickly got a needle and thread, a good sharp razor and a disinfecting solution and operated on all the desperate cases, that is on all the ones who were so far gone as to be in a sort of comatose condition. To the next lot that were not quite so bad I administered a tablespoonful of castor-oil and applied massage to the crop. To the final few that could drink unaided I gave water saturated with salts and also massaged the crop. I recovered all but five.

The five that died included the two that were past help in the beginning and of the other three two were of the lot which were treated with salts and water and one of the lot treated with oil. To all appearance the liquid tended to further swell the inert contents of the crop and so finished the bird.

All those that I operated upon recovered nicely on a soft diet to which I added a bit of stimulant in the shape of gentian and red pepper. The operation is very simple and easily performed. Have someone hold the bird or else hang it up by the feet at a convenient height. Make the incision, first of the skin, then of the crop itself, just sufficiently large enough to pass your forefinger. Be sure that your finger-nail is cut so short that it will not scratch your patient. First bring out a portion of the congested contents through gentle pressure and manipulation if possible, and then insert your finger and carefully bring out the rest. Take the greatest precaution throughout to have nothing, either liquid or solid, get in between the outer skin and the crop. The final part of the operation is to close the openings that you have made; first the crop itself, then the outer skin; each of course, independent of the other. Put about three stitches to each incision. Give the bird protection from cold and drafts and feed on soft, gently stimulating foods for about nine days after.

Carleton Co., Ont.

MRS. W. E. HOPKINS.

Incubation.

Incubation should now be in full swing or the preparations well in hand. Get the hens sitting and the incubators at work so the hatches will be out as early as possible and the pullets will be developed and ready to lay in the fall. Sound and reliable advice on incubation is contained in bulletin 247 of the Ontario Department of Agriculture which was compiled by Prof. W. R. Graham and F. N. Marcellus; from it we quote in the following paragraphs:

It is generally agreed that, in order to secure a good hatch, the hen must be placed where other hens are not likely to disturb her; for, as a rule, we seldom get good hatches when other hens lay in the nest with

the sitter. Some farmers do not set a hen until one becomes broody on a nest where no others lay, which often necessitates late chicks. The difficulty can be overcome by making a new nest for the broody hen. Get a box about twelve inches square and six inches deep; put some earth, or an overturned sod in the bottom, taking care to have the corners very full, so that no eggs can roll out from the hen and get chilled; next, put on about two inches of straw or chaff; and then put a few earthen eggs into the nest. Place the nest in some pen where nothing can disturb the hen, and put her on after dark. Feed and water must be within easy reach, and a dust bath should also be convenient. If the hen is sitting quiet the next day, you will be safe in putting the eggs under her. In our experience we get 90 per cent. of the hens to sit by following this method.

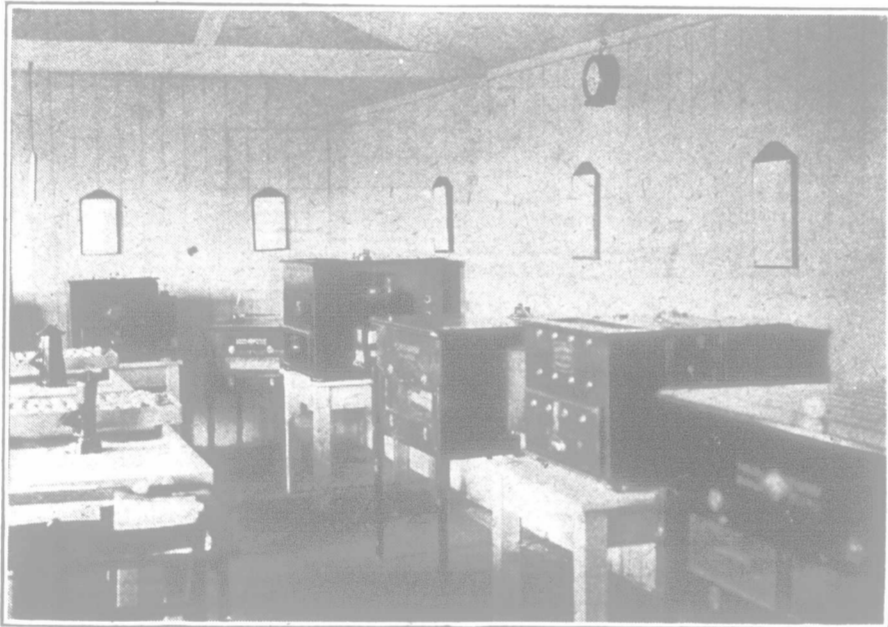
It should be remembered that the hen will be in better condition if dusted with insect powder when set, and also a few days before the hatch comes off. This will usually keep the lice in check, especially if some tansy or mint leaves are used in making the nest.

Artificial Incubation.

During recent years many incubator experiments have been conducted here, as well as at other colleges, and some progress had been made. It is our purpose at this time, not so much to go into the details of these, but to give, if possible, the best methods we know that can be used by the average person.

SELECTING AN INCUBATOR. There are many makes of incubators on the market that do fairly good work; they are not perfect, nor have they the hatching power of a normal hen, but then they are always ready to hatch eggs any day of the year, and by their use eggs can be incubated in large numbers. They do not get balky and cease hatching as some hens do—that is, unless the operator fails to do his part. Commercially they are a necessity. To the prospective buyer I would suggest the purchasing of a well-built machine, one that is double cased, and that is easily cleaned, and whose fixtures, such as the lamps, etc., are convenient. We do not know which is the best incubator made.

Recent scientific investigations indicate that it is



A Well-equipped Incubator Cellar.

probable, in some instances, that disease organisms, found in dirty incubators, cause serious harm. Our plan—no matter what the type of machine—is to thoroughly wash the entire interior of every machine before putting in the eggs for hatching. We use a ten per cent. solution of a tarry compound, such as creoline or zenolene. This helps to clean the machine, and if applied hot, so much the better. We have obtained best results by using water or moisture during the entire hatch. I have seen good hatches from incubators where no moisture was used. We use a pan beneath the egg-tray, nearly the full size of the machine, and keep this pan covered with water, or wet sand, not more than one inch in depth.

Many incubator thermometers are not reliable, and it is, therefore, advisable each season to have the thermometers tested. Any druggist will have a registered thermometer, and can do the testing if the owner does not wish to.

The hatch is made or lost usually during the first week of incubation. Keep the temperature well up to 103 degrees, with the thermometer lying on the eggs, and maintain as even a temperature as possible.

Do not set dirty, washed, small or extra large eggs. The shell is porous and disease germs that may be on dirty eggs might infect a number of eggs. Do not turn the eggs when your hands are dirty, or immediately after handling lamps or kerosene.

The room in which the machine is operated should be clean and well ventilated. If possible, select a room that varies but little in temperature; in such a room it is easier to keep the hatching chamber of the machine at an even temperature. Where there is a strong odor of lamp fumes, or where there are decaying vegetables, or where moulds grow upon bits of boards or upon the walls, an incubator will not usually do good work. The lamps burn brighter, the eggs hatch better, and the chicks have more vitality when the air in the incubator room is pure.

Operating The Machine.

We have obtained the best average hatches and the best chicks, other things being equal, operating the machines at 103 deg. F., with the bulb of the thermometer resting on the top of an egg; not at the side of an egg nor at the bottom. This heat is maintained throughout the hatch. We are particular to set clean eggs, usually not over two days old, which have been held at a temperature between 55 and 75 degrees. The eggs are best put in the machine in the morning; then the gradual heating of the eggs goes steadily on during the day, and by night we know that the machine is not too hot or too cold. Moisture is used from the start; we are more particular about moisture the first week of the hatch than at any other period. No ventilation is given until after the ninth day of incubation. Our best hatches in nearly all instances are from machines operated at a very even heat, with plenty of moisture, and little or no ventilation up to the ninth day. After this period the eggs need plenty of air and the ventilators opened gradually until wide open at hatching time. The hatch appears to be made or lost during the first week of incubation.

We do not like to let the chicks off the trays or down in the nursery. If they pant, it is nearly always from a lack of air; in such cases we open the door slightly or sufficient to keep the chicks comfortable.

HORTICULTURE.

An Important Experiment.

Orchardists will have recognized, no doubt, a noticeable dissimilarity in the two spray calendars recently published in "The Farmer's Advocate," namely the Ontario spray calendar in the issue of March 27, and the spray calendar for Nova Scotia apple orchards in the issue of April 10. The latter more strongly favors Bordeaux mixture as a fungicide and places complete confidence in arsenate of lime as an insecticide. The Ontario authorities, who stand sponsor for the Ontario spray calendar are not ready to recommend arsenate of lime unqualifiedly. There is a considerable difference in price between arsenate of lead and arsenate of lime, the latter being the cheaper, but cases of burning are not unknown and some fear is entertained that injury to foliage might result if it were not properly used. However, in order to ascertain the adaptability of the N. S. practices to Ontario conditions, which are not the same as in the peninsular province, the Fruit Branch of the Ontario Department of Agriculture is testing out the recommendations of the two spray calendars in the Gilbertson orchard, near Simcoe. On one block in the orchard sprays will be administered according to the recommendations of the Nova Scotia spray calendar; in another block, similar in character and in varieties of fruit, the Ontario spray calendar will be followed. In still another block the various dust mixtures will be given a thorough test. This experiment should be closely followed by all growers, as the results will no doubt have considerable influence on spraying methods and practices in the future.

FARM BULLETIN.

The Farmer's Generosity.

EDITOR "THE FARMER'S ADVOCATE":

Almost every day we see large advertisements in the newspapers supporting the present tariff. In fact, the manufacturers consider the tariff so perfect that they think any attempt to change it would be like "painting the lily." They try to prove in their advertising that the manufacturers receive almost no benefit from the tariff. Indeed, they even quote the price of agricultural implements in the various border towns of Canada and the United States, and these prices seem to show that the Canadian manufacturer is not taking advantage of protection to raise his prices. And then to clinch the argument they ask: "Under free trade where will the revenue come from?"

There are only two places where revenue can come from, viz., the property and income of the people. A just tax is one that grants a small exemption on property and income, and then imposes a low rate on the poor and a high rate on the wealthy. The tariff is an unjust tax, for it is too hard on the poor. A man may own nothing in the world, he may have to buy food and clothing for his family on credit for a time, and yet he will have to pay a tax on these necessities. In this case it seems to be a case of taxing a man's debts rather than his income or property.

The farmer is asked to support the present tariff and inland revenue taxes to help reconstruction or prosperity, or some other excuse. It is presuming too much on the farmer's generosity to expect him to pay duties on what he buys for the sake of helping someone else to become prosperous. Canadian manufacturers have proven themselves well able to compete with Americans in almost all markets of the world except here in Canada. Why not make them compete in Canada? Farmers are asking for fair play, not for favors. Farm products in normal times obtain no protection, hence manufacturers should obtain none. The deficit in the revenue should be met by a just method of direct taxation. The manufacturers do not like the idea of lowering their prices to the United States level, and at the same time having new income taxes to pay. No wonder they ask in alarm: "Under free trade where will the revenue come from?"

Ontario Co., Ont.

NELSON McDOWELL.

this matter up in members. Possibly being low in fat. The depth of cream on the visible cream is not a will be less on a twelve hours old. The are reliable means and cream and of k has been watered. Because the milk has been added to disabuse their minds is the result of the The individuality test. A cow giving o test as high as one ever, there are very the standard set by test to vary accord- the herd, and also occasionally due to ological conditions. airer, and more ac- ality of milk which e ascertained, if a er than convicting

standpoint that the epidemics have in inated milk. The oply of the city are dairymen. Every customers with milk point of cleanliness difficult to keep the in the winter and this year owing to the flank and udder milk through several moving the lactic n and cooling it in e practices which If these things are milk to be almost ould be an absence

ailed in producing person know little duction of butter while high, is not d, labor and dairy milk, or the pound n, even though she on the market to- of feed which the comes high, and farmer who must being proprietor, uch remuneration wn which in many capital which the and implements. present prices of w does not realize es to the man in ve cents a pound heese, and fifteen are the cheapest an's table.

Holsteins. ng the town of a dairy district, black and Whites at vicinity. On s registered herd le, at very re- risk throughout in excellent cond- id, including a cows, realized paid by Logan w, Pet Lady of ality and with a d by Lakeview or four-year-old. Moote, of Can- ng cow, brought animals selling for s and addresses

- Bronte\$195
- Canboro..... 250
- Sta..... 400
- Dunnville... 490
- 450
- 230
- cliff..... 130
- stone..... 380
- J. Moore,
- 205
- 225
- nnville..... 300
- 280
- Burnaby. ... 225
- 205
- er..... 110

Parliament Keeps Itself Busy Fanning the Wind.

VERY comforting but tiresome solicitation was expressed for the health and welfare of the Canadian people on Friday, April 4, when Hon. N. W. Rowell moved the second reading of the bill to establish a Department of Health. Beginning by saying that "the proposal embodied in the Bill is one of the most important features of the Government's policy during the period of reconstruction," Mr. Rowell occupied the House with a lengthy dissertation upon the necessity of protecting the health of the people. It is well known that the creation of this department is a pet project of Mr. Rowell's, supported by the Medical Health officers of some of our large cities. Judging by some figures given by the Minister, the need for some constructive, national endeavor to improve the physical welfare of Canadians is just as strong as he made it. A careful reading of the following should lead to careful thought: "361,695 men were medically examined under the Military Service Act; of these 180,440 were accepted as physically fit; of the remainder 181,255 were found to be more or less physically unfit. In other words, of the adult male population of Canada of military age more than one-half were found physically unfit for active service." For lack of accurate vital statistics in Canada the Minister gave the following comparative figures for other countries comparing them with such Canadian statistics as are available: "The deaths of children under one year of age per 1,000 births in New Zealand are 50. How do other countries compare with New Zealand? Australia comes next with 68 deaths to 1,000 births; then comes Sweden, 70 to 1,000; France 78 to 1,000; the Netherlands, 87 to 1,000; Switzerland, 91 to 1,000; Ireland, 92 to 1,000; England and Wales, 110 to 1,000; and then when you pass over to countries like Russia you get 248 deaths per 1,000 births, and Chili, which has the highest mortality, 286 deaths per 1,000 births." Among the Canadian Provinces, he said, "The lowest on the list is Saskatchewan, 91.2 per thousand for the year 1916. The rest follow in this order: Prince Edward Island, 93.6, 1917; Ontario, 107.2, 1916; British Columbia, 107.3, 1916; Manitoba, 113.5, 1914; Nova Scotia, 120.9, 1916; Quebec, 153.4, 1916." Referring to cities as showing more startling figures the following is quoted: "First let me give you the rates of infant mortality under one year of age as applying to certain cities in the Old Country for the year 1916; London 89 per thousand; Bristol, 95; Edinburgh, 100; Glasgow, 111; Manchester, 111; Nottingham, 116; Liverpool, 118; Leeds, 129. In England they believe that the rate of infant mortality is unnecessarily high. Compare the figures which I have just given with those for our own Canadian cities. I have the figures for six cities, two in Quebec, two in Ontario and two in Western Canada. The lowest percentage of infant mortality per thousand is found in Sherbrooke, Quebec, 101. Then comes Toronto, 109; Winnipeg, 126; Vancouver, 144; Quebec 203; Montreal, 207; Ottawa, 224."

"In the South African war, of the British forces, there died of disease 14,653; there were killed or died of wounds, 7,792. In other words, sixty-five per cent. of the total deaths were due to disease and thirty-five per cent. to casualties in action. In the Russo-Japanese war, in the Russian army, 20,890 died of disease, and 31,458 were killed or died of wounds. That is, forty per cent. died of diseases and sixty per cent. died from wounds. In the Japanese army 27,000 died of disease, and sixty-nine per cent. died from wounds. During the present war, in the Canadian Expeditionary Force, 2,815 died of disease, and 51,853 were killed or died of wounds. That is, 5.14 per cent. died of disease, and 94.85 per cent. from wounds. That is a magnificent tribute to the efforts and skill of our Army Medical Service Corps. I submit that I have disclosed a state of affairs that calls for the most serious consideration not only of the Government and the members of this House but of the people of this country, as to what action we can take to improve conditions. I am sure we all agree that with our invigorating climate, our great open spaces and the healthful conditions under which our people may be permitted to live there should be no country in the world in which the death rate should be lower than in the Dominion of Canada, and no population more healthful and vigorous than ours."

Naturally, the doctors, of whom there are quite a sprinkling in the House, had a perfectly glorious day. There were in their element and out of it and disported themselves and exhibited vast stores of knowledge and a little healthy criticism veiled in rushing torrents of parliamentary oratory. Dr. Sheard, South Toronto, greatly feared that the bill will conflict with provincial authority. He dilated at length upon the necessity for a bureau of scientific research in connection with the new department. He rather favored an organization similar to that followed in the United States which he described as follows: "The United States has made considerable advancement as regards sanitary matters.

It has its Bureau of Aniline Industries, its Bureau of Scientific Research. It has not only its statistical department, but its advanced experimental stations, and we find when we investigate the administration of these matters at Washington, that they have a Federal Health Department, which is almost wholly and entirely scientific and laboratorial in its efforts. There are four great departments of active workers in sanitary science—there are the great department of pathology, the great department of chemistry, with separate laboratory equipment and departments for each, and the separate department of pharmacology. That is how the Washington Federal Health Department is arranged at the present time."

Dr. R. J. Manion added an estimate of the value of human life by saying: "It is worth noting that life insurance companies estimate the value of a human life at \$2,500 to \$4,000, and when you take into account the thousands of these little infants who die every year and the deaths from preventable diseases, you realize the importance of preserving the health of our people."

Public Welfare By Order in Council.

When it came to a discussion of what was meant by the words "social welfare" included in the Bill the House travelled all up and down the Great Lakes and over to Great Britain in an endeavor to find a meaning. Mr. Rowell drew a storm of protest from Dr. Michael Clark, Red Deer, when he read an Order-in-Council passed last December under the War Measures Act outlining the housing scheme about which the House is supposed to legislate this session. Dr. Clark said: "I understood that the policy of the Government in regard to housing was still to be discussed in the shape of a Bill which was mentioned in the Speech from the Throne, but it appears that the policy has been not only settled but put into operation by an Order-in-Council. I have been pretty patient with Orders-in-Council,—my Hon. friends opposite perhaps think too much so,—but this is a method of procedure which, if I understand it correctly, I should advise the Minister to look into very carefully. I am amazed,—I am the subject of consternation,—if I have correctly learned that the Government, by an Order-in-Council, is actually consulting about a policy which is yet to be debated and decided upon in this House. I am bound to add an opinion for what it is worth that it would have been very much better for the Government if they called Parliament together in December, 1918, and submitted housing legislation to this House before they took a course which practically amounted to legislating as a Government by Order-in-Council for the Dominion of Canada upon a purely domestic affair in consultation with the Provincial Governments."

Religious Prejudice Has Its Fling.

General Sir Sam Hughes again broke out on Monday, April 7. The occasion this time was the bringing forth of a resolution asking that a Select Committee of the House be appointed to investigate the conditions and facts surrounding the raid by an officer and men of the Militia Department, of a Jesuit Novitiate at Guelph, Ontario. Notwithstanding the ready acquiescence of the Government to such an investigation, the subject was considered a sufficiently valid excuse for wasting a full afternoon and evening. The Minister of Militia exonerated himself and his Department, admitting the indiscretion of the officer who raided the Novitiate. After he got through, the Orangemen and the Roman Catholics went to it in a perfectly joyful manner to anyone who enjoys a scrap in words, but it was kept up for too long. At times one would have thought a prayer meeting was in session except for the hats that might be seen on the heads of several members. The House was treated to the relative merits of Protestant and Roman Catholic college students as willing to enlist. The history of the Jesuit Order was more or less fully related and several impassioned speeches stirred up all the ire and animosity that could be gathered together from either side of the House. And all to no purpose. Half an hour would have served to arrange for an investigation and all the deplorable discussion would have been avoided. Moreover, the business of the country could have been proceeded with. This is perhaps an exaggerated instance of how small pretexts are taken to use up hours of time discussing questions of very minor importance. One would think that the serious business of the country should receive foremost consideration, leaving petty religious jealousies for those who have nothing better to do. The curse of the present session is the waste of time and when the session promises to last until June, in any event, there should be no time for quibbling. If the Government deems it advisable for several Cabinet Ministers to stay in Paris until Peace is concluded, the conduct of affairs in Canada should not suffer in the meanwhile.

Immigration Act to be Ammended.

A bill to amend the Immigration Act was introduced in the House early last week by Hon. J. A. Calder, Minister of Immigration and Colonization. Brief reference was made to some of the amendments proposed all of which will, of course, be more fully discussed when the bill reaches the committee stage. Briefly, the Minister said: "In the first place, the Bill provides for the extension of time during which persons who enter Canada as immigrants may be deported. Under the law as it now stands, the period is three years—we are

proposing to extend that to five years. There is a provision in the law as it now stands casting upon transportation companies certain duties and responsibilities in reference to the carrying of immigrants to Canada. It is proposed to extend the term "transportation company" so as to make it applicable to the Federal Government and the Provincial Governments which have transportation systems. Under the law as it now stands there are certain prohibited classes; certain people are prevented from entering Canada on account of their being mentally or physically unfit or for some other reason. It is proposed to include within the prohibited classes persons who are suffering from chronic alcoholism; (2) Those coming within the class of what is called constitutional psychopathic inferiority. Then, it is suggested that we should carry into our law a provision to the effect that all persons who are either mentally or physically in such a condition as that they are not likely to be able to earn a living should be excluded. It is also suggested that we should set up a literary test and that persons should be included in the prohibited classes who are not able to read. That provision has not been in our law as yet. The Bill also provides that we should include in the prohibited classes persons who believe in, or advocate, the overthrow of constituted Government by force or violence or who advocate the unlawful destruction of property; also persons guilty of conspiracy against His Majesty; enemy aliens who have been interned and also enemy aliens who have been deported from Canada, or from British countries, for any cause."

Royal Commission on Labor and Industry.

The Senate, by reason of its borrowed plumage in the form of Ministers of the Crown who should sit in the House of Commons, was the scene of an important announcement made some days ago by the Minister of Labor. Hon. Gideon Robertson, referring to the steps taken by the Government to promote better relations between capital and labor referred to the fact that "difficulties have become more and more frequent as the number of men who were organized increased from year," and stated that "it would be better, if possible, to prevent a dispute occurring than to adjust it after it has occurred." For several months, according to the Minister, the Government has been working in this direction and as a result a plan has been evolved, looking for a betterment in the relations between capital and labor, which was described as follows: "It is proposed that a small commission of five or seven members, composed of men who absolutely command the confidence of the public of Canada, and who are personally deeply interested in this serious problem, should immediately proceed to all the large centres in Canada and hold consultations with the employers and the workmen, just as I have been doing here in a small way, and, after carefully surveying the situation and getting the joint opinion of the various classes interested in the problem, let us have their recommendations not later than May 15; and, upon the report of that commission, based upon the evidence and judgment of the people throughout Canada who are interested—employers and workmen alike—that we should attempt to make a decision as to what should be the Government's policy respecting any legislation that may be necessary in order to create machinery for the carrying out of the idea or plan, or for promoting, as far as the Government may be able to assist, the spirit of co-operation and harmony and closer relationship between employers and employed. That inquiry will go so far as to undertake to ascertain the possibilities of joint representation in the control and operation of at least certain industries."

Apparently unemployment in Canada is abating and the following general statement made by the Minister of Labor, should have some bearing on the necessity for spending millions of dollars from a depleted treasury for the purpose of relieving an unemployment that apparently will not exist in a very short time: "The unemployment situation throughout Canada is improving from day to day, except in the province of British Columbia, where there is unhappily an exodus, or I might term it a migration, of soldiers who returned to that province. As soldiers they have the option of taking their discharge wherever they may choose in the Dominion, too many of them, for various reasons,—in some instances because of invitations extended by provincial officials who desired immigration to that province,—have been encouraged to go out to British Columbia, and there is a rather acute situation existing in the coast cities at the present moment. But I have every reason to think that probably within sixty days from now we may have an actual labor shortage in Canada. Only yesterday I received word that our railroads west of the Great Lakes, who just a couple of days ago placed an application for a large number of laborers, have stated that within thirty days, or as soon as the frost is out of the ground, they will want 10,000 men. That is going to absorb the large number of aliens who have found themselves out of employment or have been displaced to give employment to returned soldiers."

Canada's Financial Statement.

The financial statement of the Dominion of Canada to March 31, 1919, as compared with our position on March 31, 1918, is given in the accompanying table. This statement was given out by the Finance Department on Tuesday, April 8.

Funded Debt

Temporary J Bank Circula Dominion N Savings Bank

Trust Funds Province Acc Miscellaneous

Assets Investments Sinking Other In Province Acc Miscellaneous

Total Assets Total Net Debt

Revenue Customs Excise Post Office Public Works Miscellaneous

Total Expenditure

Expenditure War Public Works Railway Total

Just by here that al of Commons a the assent of some little cer a few day ag one day wher Committee, t Everybody j wields the ma beeline to the of the mace fr top of the ta turning, repor Sent back to a doubled himse that the Dept the House in twice more he his officers, t Sergeant-at-A the Senate st audience who true common awful impressi supposed to c offices and m their irrespons Generaloccupi Acting Prime consent was p was finally d we took for the declared forr Deputy nodde and when all t and repeated standing seats had been give put on their di railway probl

Canada

The first a held in Toront One hundred a from some of t were disposed of the animals high quality, ever, there w so attractive, of the safe. A and materially animals sold t and four femal the eleven mal Posch, consi O'Reilly, topp bid of G. E. A. R. O. daugh tions back wer

Financial Statement, Dominion of Canada.

Public Debt.	1918	1919
LIABILITIES.		
Funded Debt—Payable in Canada.....	\$ 744,379,494.74	\$1,475,080,964.10
" " London.....	362,703,312.40	362,703,312.40
" " New York.....	75,873,000.00	75,873,000.00
Temporary Loans.....	579,005,464.00	361,187,666.65
Bank Circulation Redemption Fund.....	5,799,609.27	5,862,263.40
Dominion Notes.....	251,622,765.54	297,319,480.55
Savings Banks—Post Office.....	39,657,173.46	39,989,438.86
Dom. Gov't. Saving Banks.....	12,004,822.43	11,275,237.98
Trust Funds.....	10,923,371.69	11,369,588.42
Province Accounts.....	11,920,481.20	11,920,481.20
Miscellaneous and Banking Accounts.....	28,072,687.43	29,675,240.96
	\$2,121,962,182.22	\$2,682,256,674.52
ASSETS.		
Assets.....	\$ 16,291,525.04	
Investments.....	238,032,849.35	
Sinking Funds.....	2,296,327.90	18,667,513.13
Other Investments.....	758,947,455.94	345,834,330.16
Province Accounts.....		2,296,327.90
Miscellaneous and Banking Accounts.....		877,081,210.09
Total Assets.....	\$1,015,568,153.23	\$1,243,879,381.28
Total Net Debt March 31.....	\$1,016,394,023.99	\$1,438,377,293.24

Revenue and Expenditure on Account of Consolidated Fund.

	1918	1919
Revenue		
Customs.....	\$143,311,395.12	\$147,740,215.14
Excise.....	26,677,387.23	30,011,839.57
Post Office.....	20,774,200.40	20,100,000.00
Public Works (including railways and canals).....	27,200,585.90	39,194,472.54
Miscellaneous.....	34,408,940.34	68,184,281.32
Total.....	\$252,372,508.99	\$305,230,808.57
Expenditure		
War.....	\$299,930,317.41	\$347,824,274.27
Public Works (including Railways and Canals).....	27,025,729.69	10,873,913.55
Railway Subsidies.....	720,404.75	25,896.00
Total.....	\$327,676,451.85	\$364,724,083.82

How Royal Assent is Given.

Just by way of interest it may be worth mentioning here that all bills, after they are passed by the House of Commons and the Senate, must, apparently, receive the assent of the Governor-General. Now it requires some little ceremony to give this assent as we found out a few days ago. Ten bills had passed both houses and one day when the Commons were discussing a bill in Committee, three heavy knocks were heard at the door. Everybody jumped and the Sergeant-at-arms who wields the mace and bosses the pages around, made a beeline to the clerk table and a subsequent quick change of the mace from its place in committee to its place on top of the table. Then he went to the door and, returning, reported a message from the Governor-General. Sent back to admit the messenger, the latter appeared, doubled himself up like a jack-knife twice and announced that the Deputy Governor-General desired the presence of the House in the Senate chamber. After doubling up twice more he disappeared, followed by the speaker and his officers, the mace resting on the shoulder of the Sergeant-at-Arms. Members straggled after and entering the Senate stood up along the back like the part of an audience who held no reserve tickets at a concert. Like true commoners they were merely onlookers and in the awful impressiveness of the Senate chamber are doubtless supposed to cast aside the dignity of their responsible offices and maintain a solemn silence in the presence of their irresponsible superiors. The Deputy Governor-General occupied the speaker's chair in the Senate and the Acting Prime Minister stood at his right. His Majesty's consent was pretty well filtered through by the time it was finally delivered by a black robed gentleman whom we took for the clerk of the Senate, but was nevertheless declared formally given. The Governor-General's Deputy nodded his head solemnly after each declaration and when all the declarations had been read in English and repeated in French the meeting was over and the standing seats were vacated. The necessary assent had been given and members of the Commons again put on their dignity so that they could discuss Canada's railway problem.

Canadian National Holstein Sale.

The first annual Canadian National Holstein sale, held in Toronto April 10 and 11, was a decided success. One hundred and twenty-five head of Holsteins drawn from some of the most renowned herds of Western Ontario were disposed of at remunerative prices. The majority of the animals offered were of excellent breeding and high quality, and bidding was brisk on these. However, there were a few animals that were not quite so attractive, and they tended to reduce the average of the sale. A number of American buyers were present and materially helped the sale. A few of the poorer animals sold under the \$100 mark. The one hundred and four females selling for over \$100 averaged \$347.84; the eleven males averaged \$548.18. King Segis Pontiac Posch, consigned by Gordon S. Gooderham and Jos. O'Reilly, topped the sale at \$3,350. He went to the bid of G. E. Black, of Guelph. This bull has seven A. R. O. daughters, and his ancestors for several generations back were producers of record stock. That grand

old cow, Fairview Posch, was the highest-priced female of the sale. Although nine years old she has just recently completed a test, making 29.54 lbs. butter in seven days. She was the first-prize cow at London last fall. Her best day's milking was 110.9 lbs. She was consigned by A. E. Hulet, of Norwich, and went to J. B. Jones, Detroit, Mich., for the consideration of \$1,380. High-lawn Segis, a four-year-old cow consigned by Jos. O'Reilly, was purchased by Wheatfield Farms Inc., of New York, for \$1,300, and her six-week-old calf brought \$450. Aaggie Faforit Johanna, from the Gooderham Farm, went to W. L. Smith, of Ancaster, for \$1,000. Although up in years this cow has a particularly good record behind her. She is due to freshen to King Korndyke Sadie Keyes. Among the consignors to the sale were J. O'Reilly, G. S. Gooderham, Oak Park Stock Farm, L. H. Lipsit, A. E. Hulet, W. F. Elliott, W. C. Houck, J. Kilgour, K. M. Dalglish, J. B. Hammer, R. M. Holtby, J. Peel and W. H. Shaw.

Following is a list of prices received for the animals, together with the names and addresses of the purchasers:

Females.		
High Lawn Segis, Wheatfield Farms Inc., La Salle, N.Y.....		\$1,300
Heifer calf, W. F. Elliott, Unionville.....		450
Phocis Lilly Korndyke, Norman S. Yorke, Sutton West.....		165
Keyes Echo Hengerveld, Earl H. Stover, Theford.....		200
Pontiac Jewel Echo, Fred Hibbert, Ingersoll.....		345
Katy Burke Korndyke Pontiac, S. Elliott, Kingston.....		500
Toitilla of Riverside, A. J. Tamblin, Orono.....		900
High Lawn Segis Calamity, R. H. Stover, Theford.....		195
Pontiac Helena Echo, W. F. Hunt, Dundas.....		145
Phocis Lilly Ormsby, R. H. Tillet, Roache's Point.....		155
Phocis Lilly Posch, Sir Henry Pellatt, King.....		205
Champion Toitilla Rauwerd, A. R. Greene, Concord.....		440
Helena Hermes Keyes, W. L. Hunt, Dundas.....		185
Hill-Crest Pontiac De Kol, H. Boake, Jerseyville.....		110
Hill-Crest Pontiac Pietertje, B. B. McCarty, Thamesford.....		310
Rooker Netherland Bell, S. Elliott.....		360
Burkeyje Hengerveld May Echo, W. F. Elliott.....		500
Het Loo Duplicate, Wheatfield Farms.....		535
Heifer calf, R. M. Holtby, Pt. Perry.....		200
Phocis Echo, T. E. Shaver, Jerseyville.....		150
Burkeyje Ormsby, W. F. Elliott.....		240
Rella Netherland Echo, Wheatfield Farms.....		165
Echo Ormsby Countess, J. B. Jones, Detroit, Michigan.....		200
Rebecca Ormsby, Hector McGee, Woodbridge.....		165
Daisy Echo Gerben, R. H. Tillet.....		110
Daisy Gerben Calamity, S. Elliott.....		265
Mutual Pauline Patti, Sir Henry Pellatt.....		260
Daisy Gerben Ormsby, Fred Bagg, Hespeler.....		100
Johanna Nig, Geo. Smith, Pt. Perry.....		305
Riverdale Lady Lyons, J. T. O'Connell, Peterboro.....		180
Grace Fayne Faforit, S. Elliott.....		220

Riverdale Lady Segis, Gates & Darnell, Guelph.....	185
Madam Imperial Beauty, Wheatfield Farms.....	350
Ormsby De Kol Pontiac, Hector McGee.....	245
Manor P. H. Nicolo, W. F. Elliott.....	520
Manor K. S. Belle, Ira Shaver, Ancaster.....	350
Manor Segis Belle, Ira Shaver.....	400
Manor P. H. Girl, Neil McLean, Rockwood.....	205
Manor Segis Posch Pietertje, Wm. Marshall, Milton.....	190
Manor K. S. Hengerveld, Allan Steeves, Moncton, N. B.....	255
Manor Segis Artis, H. F. Boake, Downsview.....	200
Manor Segis Car Born, J. McMillan, Belmont.....	260
Manor Segis Rue, Sir Henry Pellatt.....	110
Aaggie Faforit Johanna, W. L. Smith, Ancaster.....	1,000
Aaggie Wayne Korndyke, A. R. Green, Concord.....	350
Manor Segis De Kol, J. S. Baird, Scarborough Jct.....	255
Mary Mercena Pontiac, Jas. B. Jones.....	490
Manor Segis Vincent, Geo. Sexton, Scarboro.....	500
Manor Segis Pontiac De Kol, Sir Henry Pellatt.....	200
Manor Segis Mayflower, W. F. Elliott.....	470
Manor K. S. Flower, A. M. Muir.....	340
Manor Segis Princess, D. B. Tracy, Cobourg.....	405
Manor Segis Inka, B. B. McCarty.....	370
Manor Segis Pauline, J. H. Power, Bowmanville.....	310
Manor Segis Countess, H. J. Miell, Hagersville.....	265
Manor Segis Maud, Hospital for Insane, Hamilton.....	270
Artis Foekje Pontiac, R. C. Lanning, Waterford.....	430
Manor Segis Burke, Thos. Baird, Georgetown.....	195
Manor Segis Lady, J. McMillan.....	405
Hill-Crest May Echo Belle, J. B. Jones.....	320
Manor Mercena Schuiling, Wheatfield Farms.....	210
Colantha Hengerveld Brookbank, Angus C. Taylor, Belmont.....	230
High Grove Inka Ormsby, Sir Henry Pellatt.....	185
Betsy Pauline Korndyke, Sir Henry Pellatt.....	270
High Grove Echo Fayne, Wheatfield Farms.....	405
Flossy Wayne Pauline, Frank Mason, Wexford.....	215
Pussie Keyes Princess, Hospital for Insane.....	400
Laura Netherland Rue, J. B. Jones.....	360
Rideau Pietertje De Kol, W. C. Houck, Chippawa.....	190
High Grove Lady Brookbank, A. E. Hulet, Norwich.....	230
Bell Ormsby Canary, W. A. Tonson, Scarboro Jct.....	120
Edgmont Pride, E. E. Muirhead, Newmarket.....	750
Highgrove Grace Fayne, Frank Hibbert, Ingersoll.....	180
Bella Brookbank De Kol, Wm. Sellery, Agincourt.....	210
Nina Segis, J. T. Shanahan, East Aurora, N.Y.....	130
Sunnybrook Nina Segis, J. B. Jones.....	740
Segis Prilly Victoria, J. H. Power.....	360
Netherland De Kol Princess, Wheatfield Farms.....	1,100
Fayne Segis Maud, Wheatfield Farms.....	365
Forest Ridge Nancy Fayne, R. Cooper, Welland.....	255
Molly May De Kol, J. B. Jones.....	600
Forest Ridge Segis Nancy, I. M. Metcalf, Bowmanville.....	455
Llenroc Pontiac Ormsby, Sir Henry Pellatt.....	305
Korndyke De Kol Artis Prilly, Sir Henry Pellatt.....	465
Coronation Lass of Willowbanks, Sir Henry Pellatt.....	425
Miss B. B. DeBoer, Sir Henry Pellatt.....	360
Low Banks Korndyke May Echo, Sir Henry Pellatt.....	335
Pontiac Johanna Artis, J. S. Baird.....	425
Sunnybrook Lillian, Wheatfield Farms.....	470
May Belle, Wheatfield Farms.....	300
Sunnybrook Canary Girl, Wheatfield Farms.....	295
Natoye Mercedes De Kol, Earl Stover.....	225
Pontiac Ormsby De Kol, J. B. Jones.....	810
Victoria Pontiac, J. T. O'Connell.....	320
Ben Vorlick Princess De Kol, Sir Henry Pellatt.....	235
Verbelle De Kol Keyes 2nd, Allan Steeves.....	390
Highland Topsy Maida, Sir Henry Pellatt.....	230
Dorothy Hill, C. R. Dyke, Unionville.....	140
Victoria Helen, A. M. Muir, Scarboro.....	400
Carrie Minto Gerben, S. Elliott.....	350
Daisy Burke Pride, Wheatfield Farms.....	120
Fairview Posch, J. B. Jones.....	1,380
Posch Daisy, H. H. Bailey, Paris.....	240
Aaggie Cornucopia Posch, Wheatfield Farms.....	680

Railway Commission Gives Judgment.

After a delay of about ten days, the Board of Railway Commissioners decided that they had no jurisdiction in the matter of daylight saving, and that Parliament should decide this matter. They say that public would be endangered by the failure of our railroads to adopt the same time as United States railroads.

Our English correspondent informs us that the Agricultural Wages Board, set up by the British Board of Agriculture, has decided upon a substantial advance in the minimum rate of farm worker's wages. Workers 21 years old and over are to have a raise of 6s. 6d. per week; those over 20 but under 21 years, 5s.; those over 19 but under 20, 4s.; and those under 19 (but over 18), 3s. a week. There will be corresponding adjustments of the over-time rates on the basis of time and a quarter on week days, and time and a half on Sundays.

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Finance Department

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending April 10.

Receipts and Market Tops

Dominion Department of Agriculture Ltd
Stock Branch, Markets Intelligence, Division

CATTLE							CALVES						SHEEP					
Receipts							Receipts						Receipts					
Top Price Good Steers (1,000-1,200)							Top Priced Good Calves						Top Price Good Lambs					
Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending
Apr. 10	1918	Apr. 3	Apr. 10	1918	Apr. 3	Apr. 10	Apr. 10	1918	Apr. 3	Apr. 10	1918	Apr. 3	Apr. 10	1918	Apr. 3	Apr. 10	1918	Apr. 3
Toronto (Union Stock Yards)	7,676	5,145	5,552	\$15.75	\$13.00	\$15.50	1,793	2,342	1,157	\$18.00	\$16.75	\$17.00	579	189	287	\$22.00	\$20.50	\$20.00
Montreal (Pt. St. Charles)	488	647	408	16.00	13.00		2,932	2,431	2,511	14.25	12.50	14.50	88	18	95	16.00		16.00
Montreal (East End)	614	380	513	16.00	13.00		2,478	2,357	1,058	14.25	12.50	14.50	83	31	61	16.00		16.00
Winnipeg	2,700	1,575	3,101	15.00	12.50	15.25	83	58	113	14.50	15.00	14.50	356	5	158	15.50		15.50
Calgary		1,118	1,926		12.25	14.00							104	135	601			13.00
Edmonton	562	430	442	13.00	12.00	13.50	65	70	141	10.25	10.50	10.25		47	14	13.00		13.00

Market Comments.

Toronto (Union Stock Yards.)

There was a heavy run of cattle during the week, a total of seven thousand eight hundred head being on sale. While extra fancy prices were paid for a few individual animals, trading on the whole was inclined to be slow, and toward the end of the week reductions of from 25 to 50 cents per hundred were noted on medium and common grades of cattle. Jewish buyers were in the market for extra choice quality stock for their holiday trade, while packers had orders to fill for the Easter demand. This extra inquiry was responsible for the high prices paid on choice quality cattle. There were a few heavy steers on sale, and five head shipped in from Meaford, Ontario, averaging thirteen hundred pounds each, sold at \$16.50 per hundred, while six head of about equal weight but lacking as good quality sold at \$16; these were about the top prices. Other sales of stock of this class were made from \$14.75 to \$15.50 per hundred. Of steers weighing from ten to twelve hundred pounds each, a number of small lots sold from \$15.25 to \$15.50 per hundred, while most of the good quality stock within these weights realized from \$14.25 to \$15 per hundred. Medium quality stock was weighed up from \$13 to \$14 per hundred. For steers and heifers under ten hundred pounds some exceptionally good prices were realized. One steer of about ten hundred pounds topped the market at \$20 per hundred while numerous good sales were made from \$15 to \$18 per hundred, mostly for baby beef cattle. A straight load of nice young stock averaging seven hundred pounds per animal sold at \$14.75 per hundred, and other sales were made from \$13.75 to \$14.50. Cows shared in the fancy prices being paid and two head averaging sixteen hundred pounds each sold on Tuesday at \$17.50 per hundred, while two head of twelve hundred pounds each sold at a similar price on Wednesday, these prices constituting a record for this class of stock on the Toronto market. Other good sales were made from \$12 to \$13 per hundred, while most of the best quality stock moved from \$11 to \$12. Bull quotations were unchanged, choice animals selling from \$11 to \$11.75, per hundred, and those of medium quality from \$9.50 to \$10.50. There was a fair demand for stockers and feeders for grazing, and a number of loads were shipped to country points during the week. Good feeders changed hands within a range of \$12.50 to \$13.50 per hundred, and stockers from \$11 to \$12. Canners and cutters sold from \$6 to \$7 per hundred. The calf market held about steady; most of the best veal moved with a range of \$16 to \$17.50 per hundred, and a few head sold at \$18. Seventeen hundred and fifty calves were on sale during the week.

Lambs and sheep were in active demand and extra choice quality lambs sold up to \$22 per hundred. Top sheep realized \$15 per hundred.

The hog market gained additional strength during the week and \$21 to \$21.25 per hundred, was the range for fed and watered hog quotations although most of the hogs were bought at \$20.25 f. o. b. country points.

Of the disposition from the Yards for the week ending April 3, Canadian

TORONTO (Union Stock Yards)					MONTREAL (Pt. St. Charles)			
CLASSIFICATION	No.	Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price
STEERS heavy finished	305	\$15.14	\$14.75-\$16.50	\$16.50				
STEERS 1,000-1,200 good	1,114	14.78	14.25-15.50	15.75	44	15.00	14.00-15.75	16.00
STEERS 1,000-1,200 common	62	12.63	12.00-13.75	14.00				
STEERS 700-1,000 good	1,948	13.80	13.50-14.50	14.50	74	13.75	12.50-14.00	15.00
STEERS 700-1,000 common	565	11.48	10.75-12.00	12.00	42	11.00	10.00-11.50	12.50
HEIFERS good	1,278	13.64	13.00-14.50	14.75	36	13.00	11.50-14.00	15.00
HEIFERS fair	394	11.75	11.00-12.00	12.00	22	10.75	10.00-11.25	11.50
HEIFERS common	40	10.00	9.50-10.50	10.50	18	9.00	8.00-10.00	10.00
COWS good	597	11.37	10.75-12.00	13.00	34	11.25	10.50-12.00	12.00
COWS common	694	9.01	8.50-9.75	10.00	80	8.75	8.00-9.50	9.75
BULLS good	139	10.83	10.50-11.50	11.75	14	12.00	12.00-	12.00
BULLS common	99	9.05	8.50-9.75	10.50	45	9.25	8.50-10.00	10.25
CANNERS & CUTTERS	117	6.50	6.00-7.00	7.00	58	6.25	5.00-7.00	7.00
OXEN					5	10.00	10.00-	10.00
CALVES veal	1,793	14.50	14.00-16.50	18.00	2,932	12.00	10.50-13.50	14.25
CALVES grass								
STOCKERS 450-800 good	117	11.02	10.50-12.00	12.00				
STOCKERS 450-800 fair	99	9.85	9.50-10.75	11.00				
FEEDERS 800-1,000 good	65	12.77	12.25-13.50	13.50				
FEEDERS 800-1,000 fair	43	12.00	11.00-12.25	12.50				
HOGS (fed and watered) selects	7,548	20.94	20.50-21.25	21.25	1,044	20.75	20.50-21.00	21.00
HOGS (fed and watered) heavies	1	20.75	20.75-	20.75	10	19.75	19.50-20.00	20.00
HOGS (fed and watered) lights	131	18.81	18.75-19.00	19.00	140	18.75	18.50-19.00	19.00
HOGS (fed and watered) sows	183	18.35	17.50-19.00	19.00	25	17.75	17.50-18.00	18.00
HOGS (fed and watered) stags	7	16.71	16.00-17.00	17.00	4			
LAMBS good	363	20.62	19.00-22.00	22.00	23	16.00	16.00-	16.00
LAMBS common	148	18.00	17.00-19.00	19.00	12	15.00	14.50-15.50	15.50
SHEEP heavy	36	11.01	10.00-12.00	12.00	33	13.00	13.00-	13.00
SHEEP light	21	13.21	11.00-15.00	15.00	20	11.50	11.00-12.00	12.00
SHEEP common	11	7.81	6.00-9.00	10.00				

packing houses purchased 538 calves, 3,361 butcher cattle, 6,144 hogs and 243 lambs. Local butchers purchased 497 calves, 401 butcher cattle, 168 hogs and 98 lambs. Canadian shipments were made up of 27 calves, 52 milk cows, 208 stockers, 214 feeders, 3 hogs, and 15 sheep. Shipments to United States' points consisted of 51 calves, 983 butcher cattle and 65 stockers.

The total receipts from January 1 to April 3, inclusive, were: 83,867 cattle, 9,956 calves, 90,468 hogs and 24,626 sheep; compared with 62,972 cattle, 10,933 calves, 108,356 hogs, and 10,112 sheep, received during the corresponding period of 1918.

Montreal.

The direction of the market for some time past has been towards higher prices. Two loads of steers on the C. P. R. Yards were quoted at \$15.75 per hundred, twelve steers and three or four heifers averaging eight hundred and seventy-five pounds sold at \$14; medium light steers and heifers, weighed up together, sold from \$11.50 to \$12 per hundred and common steers went at a flat rate of \$10. Good cows were weighed up at \$12 per hundred, those of fair to medium quality from \$9 to \$10.50, and those slightly better than canners and cutters from \$7.50 to \$8.50. Canners realized the low figures at \$5 per hundred, but

only the poorest cows are being sold in that class. Good bulls were weighed up from \$11.50 to \$12 per hundred, medium at \$10 and very small light bulls at \$7.50. There was a total of fifty-four hundred veal calves on the two markets during the week, and, in addition, many straight loads were shipped direct to the plants. Prices remained firm until Wednesday on which day there was a weaker feeling. Sales were made from \$10.50 to \$13.50, and generally from \$11.50 to \$12.50.

Not enough sheep and lambs were received to make a market.

Hogs reached a top of \$21.25 per hundred, off cars, for selects. The strong prices are bringing out a larger number of light unfinished hogs. It is the opinion of the trade generally that the market cannot hold unless farmers finish their hogs before marketing. Grading is not so strict as it was a few weeks ago. Sows are still \$3 under selects, but a number of lights and heavies have gone through at select prices.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending April 3, Canadian packing houses and local butchers purchased 1,791 calves, 56 canners and cutters, 71 bulls, 223 butcher cattle, 1,178 hogs and 84 lambs. Canadian shipments were made up of 47 milk cows, and 11 lambs. Shipments

to United States' points consisted of 720 calves.

The total receipts from January 1 to April 3, inclusive, were: 9,393 cattle, 11,308 calves, 16,071 hogs and 5,108 sheep; compared with 8,324 cattle, 8,211 calves, 17,278 hogs and 5,047 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending April 3, Canadian packing houses and local butchers purchased 1,058 calves, 496 butcher cattle, 630 hogs and 61 sheep. Shipments to United States' points consisted of 17 butcher cattle.

The total receipts from January 1 to April 3, inclusive, were: 11,408 cattle, 6,324 calves, 8,826 hogs and 5,570 sheep; compared with 8,065 cattle, 7,419 calves 10,206 hogs and 4,792 sheep, received during the corresponding period of 1918.

Chicago.

Hogs.—Heavy weight, \$20.45 to \$20.60; medium weight, \$20.40 to \$20.60; light weight, \$19.95 to \$20.45; light lights, \$19.90 to \$20.25; sows, \$18.50 to \$19.90; pigs, \$17.50 to \$19.

Cattle.—A week ago good and choice beef steers mostly 50c. lower, others 25c. to 50c. lower; best she-stock, 50c. to 75c.

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Markets

Department of Agriculture Live Stock Intelligence, Division

Top Priced Good Calves

Table with columns: Same Week, 1918, Week Ending, Apr. 3, 10, 17, 24, 31. Rows show prices for calves.

Top Price Good Lambs

Table with columns: Same Week, 1918, Week Ending, Apr. 3, 10, 17, 24, 31. Rows show prices for lambs.

REAL (Charles)

Price Range Bulk Sales Top Price

00-15.75 16.00

50-14.00 15.00

00-11.50 12.50

50-14.00 15.00

00-11.25 11.50

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The Molsons Bank Incorporated 1855. Invites farmers to discuss their financial requirements at any of their many branches. If reasonable accommodation will enable them to increase production, they should apply to the local manager for it. Saving Department at every Branch. Interest at Highest Current Rate.

lower; canners and cutters and low-priced she-stock steady; bulls mostly 25c. lower; calves, \$1 to \$1.25 higher; fleshy feeders and common stockers, slow and steady; all others 25c. higher. Sheep.—Compared with a week ago quotations show a decline generally as follows: On woolled stock lambs and light yearlings, 75c. to \$1; wethers and heavy yearlings, \$25c. to 50c.; ewes, 25c.; shorn lambs, 50c. lower; shorn sheep, 25c. lower.

Montreal.

Horses.—The market for horses was neglected during the week but farmers are still ready to take good mares at from \$150 to \$200 each. The range of prices was steady with heavy draft horses, weighing from 1,500 to 1,700 lbs. quoted at \$250 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs. \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75 each and fine carriage and saddle animals \$175 to \$250 each. Dressed Hogs and Provisions.—With the market for live hogs disposed to advance and the demand for dressed hogs good, prices were quite firm at 27½ to 28 cents per lb. for abattoir fresh-killed stock 25½ to 26 cents per lb. for country dressed. Hams and bacon were unchanged, but firm with light hams at 37 cents per lb; medium weight 12 to 15 lbs. at 35 cents to 36 cents, and heavies 33 to 34 cents. Breakfast bacon sold at 42 cents per lb.; Windsor selects at 44 to 45 cents and Windsor boneless at 46 to 47 cents. Barrelled pork was quiet with Canadian short-cut quoted at \$54 a barrel, short-cut fat backs at \$52; mess pork \$45 and bean pork \$43 a barrel. Lard was in good demand with Canadian pure leaf at 30½ to 31 cents.

Poultry. With the lenten season approaching and supplies of poultry light the market was strong and choicest turkeys were quoted as high as 47 cents a lb. the range being down to 45 cents and to 40 cents for ordinary stock. Chickens ranged from 36 to 44 cents. Fowl ranged from 30 to 35 cents; ducks from 37 to 42 cents and geese from 28 to 30 cents.

Potatoes.—The market holds fairly steady with car lots of Green Mountains quoted at \$1.50 and Quebec Whites, \$1.30 to \$1.35 per bag of 90 lbs., extract, and smaller lots selling at 25 cents more.

Maple Products.—Supplies of maple products are in fair volume and demand was excellent. In a jobbing way new syrup was quoted at \$2 to \$2.10 per 13-lb. tin and at \$1.65 per 8½-lb. tin. Sugar was 24 cents to 25 cents and very little was available.

Eggs.—The statement was made that country shippers are being freely offered 44 cents f. o. b. cases returnable, but are looking for 45 cents. Receivers here were asking up to 46 cents and it is said that prices now being paid to country store-keepers are from 40 to 42 cents. Eggs were going into cold storage at around these prices and are bound to be dearer this fall.

Butter.—The price of butter continued to advance and finest was quoted at 62 cents per lb. in solid packages while dairies ranged from 46c. to 50c.

Grain.—Car lots of No. 3 Canadian Western barley were quoted at \$1.20 per bushel, ex-store. No. 4, at \$1.18; extra No. 3 Ontario, \$1.21; No. 3, \$1.20; sample grades, \$1.10; No. 2 Canadian Western oats 86 cents; No. 3 Canadian Western and extra No. 1 feed, 83c.; No. 1 feed

Protection and Profit

When money is in a Savings Account in The Merchants Bank, it is absolutely safe from loss, as far as you are concerned. All the time it is here, it is earning interest—so that the bank actually pays you to let it take care of your money. Don't carry unneeded sums on your person or hide them at home. Protect them against loss, theft and fire by opening a savings account.

THE MERCHANTS BANK Head Office: Montreal OF CANADA Established 1864. With its 107 Branches in Ontario, 34 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 25 Branches in Manitoba, 34 Branches in Saskatchewan, 65 Branches in Alberta and 8 Branches in British Columbia serves Rural Canada most effectively. WRITE OR CALL AT NEAREST BRANCH

80 cents; No. 2 feed, 77c.; Ontario No. 2 white 82½ ex-store.

Flour.—The Wheat Export Company was placing orders for upwards of 700,000 bbls. of Manitoba spring wheat flour at the price of about \$10.50 per bbl. in jute bags, seaboard, for May shipment. Meantime Government standard was quoted at \$11 for shipment to country points, ex-track, Montreal freights and to city bakers, with 10 cents per bbl. off for cash. Ontario wheat flour steady at \$10.30 per bbl. in new cotton bags. White corn flour and rye flour \$8.50.

Millfeed.—Car lots of bran was quoted at \$46 to \$47, and shorts at \$47 to \$48 per ton, ex-track. In smaller lots feed cornmeal, \$64; mixed grain mouille \$58 to \$60; pure barley meal \$56 to \$58; dairy feed \$46 and oat middling \$44, delivered.

Baled Hay.—Car lots of No. 1 timothy were \$27.50 to \$28 per ton. No. 1 light clover mixed \$26.50 to \$27; No. 2 timothy \$26.50 to \$27; No. 2 clover mixed \$25.50 to \$26; No. 3 timothy \$24.50 to \$25.

Hay Seed.—Quotations on red clover were 50 to 55 cents per lb., Montreal; alsike 33 cents to 36c. and timothy 14 to 17 cents.

Hides.—Beef hides were 1 cent up at 17c. a lb. for culls; 15c. for bulls; 20 cents for steer; veal skins were 50 cents per lb; grassers 22 cents; lamb skins \$3.25. Horse hides \$5 to \$7 each.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, April 14, numbered 193 cars, 2,800 cattle, 798 calves, 4,632 hogs, 196 sheep and lambs. Slow market. Butcher cattle steady to 25 cents lower but quality not so good as last week. Cows and bulls steady. Calves \$1 to \$1.50 per hundred lower. Sheep steady; lambs 18 to 20 cents per hundred. Hogs strong; f.o.b. selling at \$20 to \$20.50 per hundred.

Wheat.—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, \$2.14 to \$2.20; No. 2 winter, per car lot, \$2.11 to \$2.19; No. 3 winter, per car lot, \$2.07 to \$2.15; No. 1 spring, per car lot, \$2.09 to \$2.17; No. 2 spring, per car lot, \$2.06 to \$2.14; No. 3 spring, per car lot, \$2.02 to \$2.10. Manitoba (in store, Fort William), No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11½.

Oats.—Ontario (according to freights outside)—No. 2 white, 70c. to 72c.; No. 3, white, 68c. to 70c. Manitoba (in store, Fort William),—No. 2 C. W., 71½c.; No. 3 C. W., 68½c.; extra No. 1 feed, 68½c.; No. 1 feed, \$66½c.; No. 2 feed, 63½c.

Corn.—American, (track, Toronto, prompt shipment,) No. 3 yellow, \$1.80, nominal; No. 4 yellow, \$1.77, nominal.

Peas (according to freights outside)—No. 2, \$1.70 to \$1.80, nominal.

Barley (according to freights outside)—Malting, 95c. to \$1, nominal.

Buckwheat (according to freights outside)—No. 2, 95c.

Rye (according to freights outside)—No. 2, \$1.55.

Flour.—Manitoba (Toronto)—Government standard, \$10.75 to \$11; Ontario (prompt shipment, in jute bags). Government standard, \$9.65 to \$9.75, in bags, Montreal and Toronto.

Millfeed.—(Car lots delivered, Montreal

freights, bags included)—Bran, per ton, \$42 to \$48; shorts, per ton, \$44 to \$48; good feed flour, \$2.70 to \$3.

Hay.—(Track, Toronto)—No. 1, per ton, \$24 to \$26; mixed, per ton, \$22 to \$23.

Straw.—(Track Toronto)—Car lots per ton, \$10 to \$11.

Hides and Wool. Prices delivered in Toronto: City Hides.—City butcher hides, green, flats, 18c.; calf skins, green, flats, 30c.; veal kip, 20c.; horse hides, city take-off, \$6 to \$7; sheep, \$3 to \$4.

Country Markets.—Beef hides, flat, cured, 18c. to 20c.; green, 16c. to 17c. deacon and bob calf, \$2 to \$2.75; horse hides, country take-off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$4; horse hair, farmers' stock, \$28.

Tallow.—City rendered, solids, in barrels, 8c. to 9c.; country solids, in barrels, 6c. to 8c.; cakes, No. 1, 7c. to 9c.

Wool.—Unwashed fleece wool as to quality, fine, 40c. to 55c. Washed wool, fine, 70c. to 75c.

Farm Produce. Butter.—Butter continued its soaring tendency and has now reached the following exceedingly high prices, wholesale: Creamery, fresh-made lb. squares at 64c. to 65c. per lb.; creamery solids at 63c. to 64c. per lb.; choice dairy, 55c. to 60c. per lb.; other grades, down to 40c. per lb.

Oleomargarine.—32c. to 34c. per lb. Eggs.—New-laid eggs also firmed on the wholesales, selling at 46c. to 47c. per dozen, with selects in cartons bringing 49c. and 50c. per dozen.

Cheese.—Kept firm at unchanged prices year-old Stiltons selling at 35c. per lb.; September at 30c. to 31c. per lb.; new, 29c. to 29½c. per lb.

Honey.—There is no demand for honey, which is being offered at 23c. to 25c. per lb. for 5, 10 and 60-lb. pails, respectively. Poultry also kept firm at stationary prices. The following prices being quoted for live weight to the producers: Chickens, crate fed, 34c. per lb.; chickens, 27c. per lb.; hens, under 4½ lbs., 28c. per lb.; hens, 4½ lbs. to 6 lbs., 30c. per lb.; hens, over 6 lbs., 33c. per lb.; roosters, 22c. per lb.; ducks, 35c. per lb.

Wholesale Fruits and Vegetables. Apples continued unchanged in price at the extremely high level of a week ago—barrels bringing from \$6 to \$14, according to variety and quality; baskets selling at 75c. to \$1.25 per 11 qts.; Western boxes bringing \$5 to \$5.50.

Grapefruit kept stationary at \$5 to \$7 per case.

Lemons varied, selling from \$4 to \$4.75 per case.

Oranges kept unchanged, ranging from \$4 to \$7.25 per case, according to size and quality.

Rhubarb has been quite scarce and firm in price at \$1.25 per dozen bunches.

Strawberries.—Louisiana strawberries are now arriving in car lots, and have been of choice quality, selling at 21c. to 22c. per pint box.

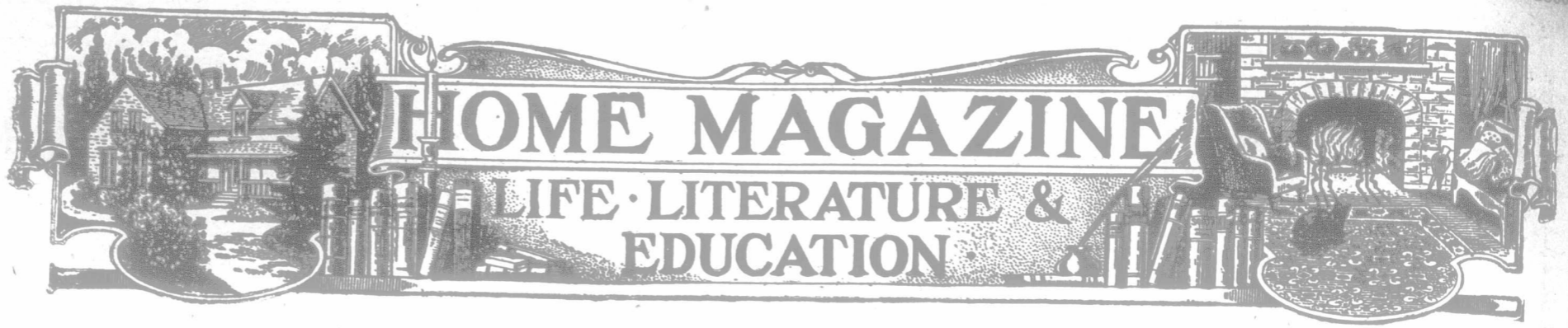
Tomatoes.—Florida tomatoes have been an extremely slow sale and varied in quality, ranging from \$5 to \$8 per six-basket crate.

Asparagus.—California asparagus of extra choice quality is arriving more freely, and is gradually becoming lower priced, selling at \$9.50 to \$10 per case of twelve large bunches.

Farmers—Bank Here By Mail. Just mail your cheques to us—we deposit them to your credit and send you a prompt acknowledgment. If you need cash we cash your cheques by mail, too, sending you the money in a registered letter. We understand the farmer's problems and gladly assist him in every way possible. We will welcome your account. Paid-up Capital \$ 6,500,000 Reserve Fund 12,000,000 Resources - 130,000,000 THE BANK OF NOVA SCOTIA We invite your account. Special facilities for banking by mail. One hundred and ninety branches. General Office, Toronto.

Beets sold at 90c. to \$1 per bag. Cabbage kept firm at \$3 to \$4.50 per barrel. Carrots were scarce and firm at \$1.25 per bag. Cauliflower advanced, selling at \$6 to \$6.50 per standard crate. Cucumbers came in more freely; Leamington hot-house selling at \$4 to \$5 per 11-qt. basket; imported at \$6.50 per basket. Lettuce did not vary. Leaf bringing from 30c. to 60c. per doz.; Canadian head, \$1 per dozen. Onions.—There were very few good onions offered, ranging in price from \$2.25 to \$2.75 per 75 lbs., with choice stock bringing \$3.25. Potatoes advances sharply, selling at \$1.50 to \$1.65 per bag; some asking \$1.75. N. B., Irish Cobbler seed potatoes bringing \$2.25 per bag.

Buffalo. Cattle.—Prices ruled generally steady on steers last week, though a medium quality, lightly finished class of steers ranging from ten to eleven hundred sold very slowly. On fat females of all classes trade was strong and in some cases higher. Bulls of all kinds sold firm to higher, stocker and feeder market showed improvement, and on best milk cows and springers a good, strong trade was had. Canadian steers offered were generally on the medium and half fat order, ranging in price from \$14.50 to \$15 for the best offered. A load of yearling Canadian steers made \$15.60. Best fat heifers landed around \$16.75 and \$17, and best heavy fat cows from \$13 to \$15, some fancy even higher. Complexion of the trade the past week showed general improvement, though there is not the demand for the half-finished handy steers which have been going for freezers. The Government's contract for chickens just announced, will, no doubt, reduce its need for beef, and these medium kinds of steers are liable to sell slow and weak, though a good demand is predicted for good weight and well-finished steers. Continued on page 774.



An Easter Thought.

"Oh, never a doubt but somewhere I shall wake!"

But where and when and how and in what form? and why do you sleep? if sleep you do! And are you not still awake?—*"Public Opinion," London.*

Beautifying Our Homes.

The Perennial Border

BY M. E. BLACKLOCK.

Miss Blacklock is an authority on flowers. She is a botanist, and one of her favorite diversions—but a diversion with very serious intent—is the work of hybridizing. Moreover, she has a seven and a half acre flower farm at Meadowvale, in Peel County, a short run by train or motor out from Toronto,—a farm which is carried on first for love of the flowers and the opportunity to wage an educative campaign in behalf of them, and only in the second place as a commercial venture. So long as it "carries itself" its owner is, she says, "proud."

Perhaps it is opportune that now, in this time for planting, Miss Blacklock's article may be interpolated in our "Reconstruction" series. For the subject of beautifying our homes is not removed as far as some may think from problems of reconstruction. The great majority of homes in Canada are not beautiful at all, from the standpoint of planting. Even those about which some effort has been made at placing flowers, trees and vines, might, as a rule, be made much more harmonious by the exercise of just a little more time and a great deal more enthusiasm. . . . And, here comes the point: In that little Parliament of Beautiful Things—the Horticultural Society's Annual Convention, whose last meeting was in Toronto in February, the speakers referred, over and over, to the great influence of beautiful landscape, trees, flowers and vines, upon character, upon the building of sweetness, and happiness, and true nobility in the lives of men, and women and even little children. It was pointed out, also, that "the Boys" while in England, have become accustomed to seeing beautiful gardens and will miss them here.—For these reasons, then, and because we believe that anything that makes for contentment and stability can reasonably be included as "reconstructive," we have as great pleasure in giving Miss Blacklock's paper a place in this series as in introducing her wonderful self to the great "audience" of *Farmer's Advocate* and *Home Magazine* readers.—Ed.]

To get the greatest possible pleasure from gardening we must possess plants that greet us early in the spring—there is no thrill like the thrill of the first snowdrops and the robin's call to the daffodil, "Come up and come out for the spring is about." The song of Solomon is one we can sing in unison, after our long winters, and we greet the sight of the good brown earth with joy and her flower children with thankfulness.

I hope you are all lovers of the hardy garden; if not, please do give it a trial, and if you are not convinced of its power to give enjoyment after say two or three years' experience, why—you can go back to your first love, and "we'll agree together that we can't ever agree."

The greatest joy of the hardy garden lies in its earliness—the second greatest joy is in its lateness, and the other joys are so many and come trooping along so fast it is not possible to enumerate them; they are studded along the months like jewels.

I will not try to persuade you to begin a hardy border by telling you it is the easiest form of gardening—at one time I really believed it was, but experience has

proved to me that all forms of gardening mean, if they are going to be successful, a certain amount of good hard work—but it is such delightful, such interesting, such healthful work that it is really play.

The first year after planting, a hardy border does not make growth enough to be very imposing, and one is often tempted to put in a quantity of rank-growing annuals to give a mass of flowers to cover over the weak spots. This frequently proves fatal, as the permanent plants are smothered out. It is better to

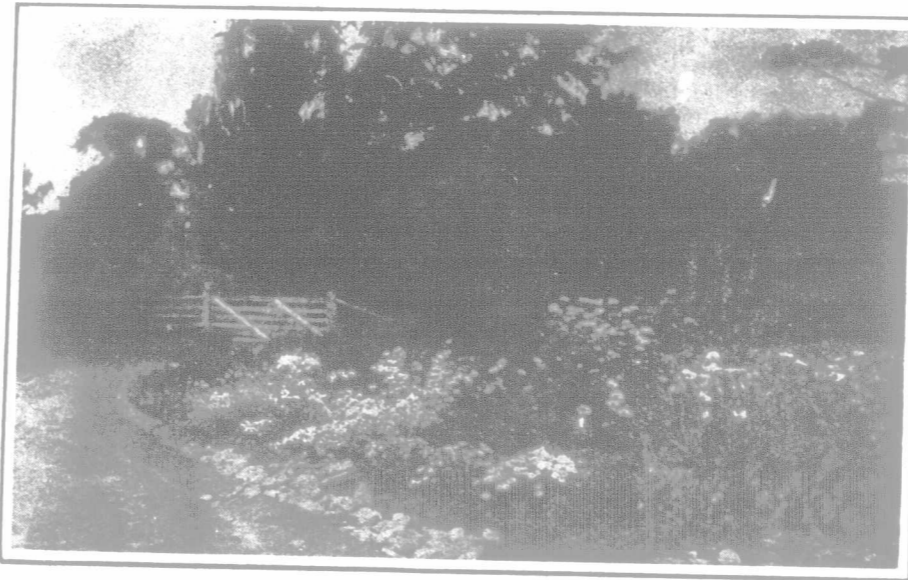
flowers of the tall phlox will have grown mysteriously small, and the rhizomes of the flag irises will be trying to climb over each other in an attempt to reach a fresh supply of nutriment. It is a recessional hymn you will be singing these days; the glory is departing from your border, and it has to be remodelled or it will soon become a wilderness.—This is an open confession I am making, so that no one may be deceived. Even hardy borders do not stay put forever. Like everything else, they wax and wane.

your plan for your border put in your permanent things first.

I am taking it for granted that you are going to make a planting plan, as it is the only royal road that I know of to get good results. You can buy, at any stationer's, paper that has waterlined inch squares upon it; these are subdivided again into tiny squares one hundred to the inch, so that drawing a plan to scale is a very easy matter. I generally make mine to the scale of five feet to the inch—4 of the tiny squares thus being equivalent to one square foot.

First, decide whether you want straight edges to your border or whether you prefer the curved line that gives you little bays and promontories where you can have small, secluded bits that come upon the beholder as a surprise. Just here I may say that it takes more artistic skill to make a really beautiful curved border than a straight one, but it is capable of being the more beautiful of the two if artistically carried out. I have gone rather softly lately in advising anyone to try curves unless I am quite certain that they have a feeling for artistic effect; otherwise the result may be a border with a sort of button-hole edge, done in scollops of mathematical exactness, which is simply a horror. Long and narrow gardens are generally more effective with narrow side borders and a deep one at the far end well massed with shrubs and the taller perennials, such as delphiniums, etc., and curving around a little into the side borders. The width of the side borders depends on the width of the garden of course; in some narrow gardens no more than two or three feet on each side can be spared for them, and it is an exceedingly difficult problem to plant such narrow borders so that they will be at all effective, though it is wonderful what good results some people can get from such a restricted amount of room. I am not advocating narrow borders, far from it; where land is plentiful let the border be of generous width, 10, 15, 25 to 35 feet, the latter if possible; then you can have grand groups of shrubs as a background and the question of planting for succession of bloom need not worry you unduly, as there is plenty of room to have something coming on all the time, even if there is also something going off. But the possessors of such unlimited space are few compared to the possessors of borders from two to five feet, and it is to these that one's sympathy goes out as their difficulties are so much the greater.

Having come to a decision as to length, width, curved or straight edges, the next thing to decide on is how to arrange one's colors. If you wish to add to the apparent length of your border, place the soft blues at the far end of it—they look a great deal farther off than, say, a mass of red flowers would; purples and mauves also have this effect to a lesser degree. The strong, warm colors such as reds and deep yellows give an effect of nearness. Masses of white and creamy yellow flowers and grey-leaved plants can be used to separate such colors as will not readily harmonize. Scarlet can be run into orange and orange can be run into bright yellow, then paler yellow can be followed by purples and lilacs, and the latter will blend fairly well with the magenta pinks with a little careful shading, and as there are numbers of flowers of this color that are extremely useful as well as beautiful it is a mistake, to my mind at least, to try to do without them. In fact, I believe a very beautiful pink garden could be made by using nothing but the various shades of magenta pink—for those whose taste runs to gardens of one color. On no account try to place the salmon pinks or scarlets near the magenta pinks, or the discord will set your teeth on edge. The magenta pink can be merged into lavenders and blues with the aid of a few grey-leaved plants,



The Beauty of the Winding Driveway.

A bit of Miss Blacklock's garden at Meadowvale, Ont.

have patience or else be very careful in your choice of supplementary plants, using such things as gladioli, or anything else of slender, upright growth that does not shade nor crowd out its neighbors.

The second year you will begin to be both delighted and proud of your hardy border if you have had anything like luck, and the third year if you are at all human, you will be bubbling over with joy and fairly bursting with pride. I wish I could conscientiously stop here, but honesty compels me to add that by the

Knowing their little weaknesses in this respect we should plant them with all the foresight and intelligence we can muster, and in laying them out we should take special pains to plant such things as practically should last a life-time without division, in places where the taking up of their neighbors for division, will not interfere with their health and happiness, and also where other permanent occupants of the border will not rob them of their fair share of light, air and nourishment. Shrubs, paeonies, can-



Blue Larkspur and Madonna Lilies.

In Miss Blacklock's garden at Meadowvale, Ont.

time the fourth year has passed you will find a "fly in the ointment" and your pride waning a little. Things will be overcrowded in spots, seedlings that you were too weak and soft-hearted to eradicate will be spoiling the effective groupings you so much admired, grass will have taken possession of your clumps of pinks perhaps, or interwoven itself in an exasperating way amongst the smaller alpine on the edge of the border; the

didum and other lilies (and numerous other things) come under the head of "permanent". Shrubs are ravening wolves in the way of stealing nourishment from their neighbors, therefore, such things as delphiniums, foxgloves, hardy asters and other things that require frequent division should be placed near them, and paeonies, lilies, etc., at least six feet away, which allows for a shrub to attain full growth without robbing them—so in making

and they will middle distant colors full sunlight, warm colors in shady positions are far more effective of it. Having your different run over in you that will give list of them.

—The first to down on a show its name make of blooming bloom. Next, shade, and want to know the different palette done and you number and division you are familiar me-not and cr edge of the border delphiniums for there are not blue as the for delphinium, m into the lavender through all the you have your n so that it can out the plants that will be k years—and pla these will be y I spoke of before.

Planting and in fair-sized gro conceded to be —spot planting such a thing process too f wonderful show and a depression.

Very few pla of time, they ha ness, and when value depends u this must be k very many pla growing simply various day l hemerocallis; m also useful in th are most gracef foliage also cou soft grey leav and the hoary pure white of t blue grey of the day lily and of grasses—even southernwood equally old "li grass are most used.

I once saw a ribbon grass ab of the old purpl was so beautifu for over twent am afraid I rathe having bred cor quent and ill-f fashioned garden.

Do not forge according to the especially the pe it is sometimes a closely for imme every other one.

It is well to re tall and stately p the making of a totally unfitted for instance, a gr known as verbas would be a deli candelabra of so majestic growth, plenty of space whereas in a sm ridiculous and u man does seat quite out of pl as they are, also in a small border or two may tak but in a large bo when in bloom, a makes an effecti things—though t like the rose, me a bed devoted to

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and they will give a rosy glow to the
middle distance—the blues being the
distant colors par excellence. The strong
warm colors look and also blend best in
full sunlight, the delicate ones in more
shady positions. . . . Masses of a color
are far more effective than mere patches
of it. Having settled where you want
your different colors the next step is to
run over in your mind the different plants
that will give them to you, and make a
list of them. Take blues, for example.

—The first to come to your mind dot
down on a sheet of paper, and opposite
its name make a note of its height, date
of blooming and the duration of the
bloom. Next, whether it likes sun or
shade, and any other details you may
want to know. By ruling columns for
the different particulars this can be quickly
done and you will be astonished at the
number and diversity of blue flowers that
you are familiar with,—from the forget-
me-not and creeping speedwells for the
edge of the border, to the anchusas and
delphiniums for the back rows—though
there are not very many of as pure a
blue as the forget-me-not, anchusa and
delphinium, most of the others running
into the lavender shades. . . . Go
through all the colors this way and when
you have your material all ready tabulated
so that it cannot escape, you can sort
out the plants and shrubs of each color
that will be kept in the same spot for
years—and place them first on your plan;
these will be your permanent plants that
I spoke of before.

Planting and, therefore, first planning
in fair-sized groups of irregular outline is
conceded to be the most effective method
—spot planting the least so. There is
such a thing as carrying the massing
process too far—the result being a
wonderful show of bloom at one time and
a depressing lack of it at another.

Very few plants flower for long periods
of time, they have their season of gorgeou-
sness, and when that is past their decorative
value depends on their leaves entirely—
this must be kept in mind. There are
very many plants that are well worth
growing simply for the leaves, such as the
various day lilies—both funkias and
hemerocallis; many of the iris tribe are
also useful in this way, and various grasses
are most graceful. . . . The color of the
foliage also counts greatly, such as the
soft grey leaves of the crowned lychnis
and the hoary veronica, and the almost
pure white of the snow-in-summer—the
blue grey of the hardy pinks, of Fortune's
day lily and of the blue lyme and other
grasses—even our ancient friend the
southernwood or "old man," and the
equally old "live-for-ever" and ribbon
grass are most effective when skillfully
used.

I once saw a six or eight-foot row of
ribbon grass about a foot above a row
of the old purple flag iris, and the result
was so beautiful I have remembered it
for over twenty years.—Before that I
am afraid I rather despised it—familiarity
having bred contempt, from its too fre-
quent and ill-advised use in the old-
fashioned gardens of one's childhood.

Do not forget to space your plants
according to their size when full grown,
especially the permanent ones; the others
it is sometimes a good plan to plant rather
closely for immediate effect and take out
every other one as they crowd each other.
It is well to remember that some very
tall and stately plants that are positively
the making of a long, wide border are
totally unfitted for short, narrow ones;
for instance, a group of the moth mullein,
known as verbasicum, Harkness' hybrid,
would be a delight to the eye, with its
candelabra of soft yellow bloom and its
majestic growth, in a large border, where
plenty of space could be given to it,
whereas in a small one it would look as
ridiculous and uncomfortable as a huge
man does seated on a little, frail chair,—
quite out of place. Paeonies, gorgeous
as they are, also take up too much room
in a small border—(if planted at all, one
or two may take the place of shrubs),
but in a large border they are magnificent
when in bloom, and afterwards the foliage
makes an effective background for other
things—though to my mind the paony,
like the rose, merits a garden, or at least
a bed devoted to it exclusively.

With a well-thought-out color scheme
and a good knowledge of plants, wonders
can be worked on paper, and I do not
know of any more delightful occupation
for the winter evenings. It is quite as
fascinating as planning a house, and the
problems will be found just as perplexing
and the solving of them give just as much
satisfaction.

The actual planting from a plan is not
as difficult as it looks, and you can, with
the aid of some garden lines placed length-
wise of the border five feet apart and
several 5-foot sticks, get an idea of dis-
tances from which you can judge where to
place things. In this way you can make
temporary blocks five feet each way
which will represent an inch on your plan,
and you can surely place your plants
correctly in that much space at a time—a
few sticks to use as dummies will often
prove useful. I almost forgot a very
important item—the preparation of the
soil. This requires to be very deeply dug
and heavily manured, trenching the fall
before planting and placing plenty of
manure in the bottom of the trenches, so
that the long-rooted plants can find some-
thing to feed on when they begin to grow.
This will encourage them to send their
roots down instead of spreading near the
surface when a severe drought would
injure them. After planting keep the
soil light and loose by frequent cultiva-
tion.—May your borders prosper! so that
you can say with Emerson:

"All my hurts
My garden spade can heal. A
woodland walk,
A quest of river-grapes, a mocking thrush,
A wild rose or rock-loving columbine,
Salve my worst wounds."



An Easter Lily Field in Bermuda Island.
Seven hundred miles from New York City.

Dr. Cody's Plans For The Schools.

DR. Cody's somewhat anxiously
awaited speech, as Minister of
Education, in the Ontario Legis-
lature, was made on April 8th, on the
occasion of the second reading of the Bill
for Consolidated Schools.

While not foreshadowing any drastic
change, the Minister gave notice of many
reforms which he favors. Important
items that affect the rural districts espe-
cially, look to the establishment of
libraries in rural districts, and increase of
the grants to raise the salaries of rural
teachers. Also legislation is to be intro-
duced to provide for peripatetic teachers
—i. e., teachers going from place to place
—in sparsely-settled regions. The most
outstanding measure, perhaps, looks to
the establishment of secondary agricul-
tural, commercial and technical schools,
for students who do not wish to take up
academic professional training.

Other items proposed: greater at-
tention to manual training and household
science in all schools; the combination of
grammar and composition; special train-
ing for inspectors; less physical and
scientific geography in elementary
classes; an improved and more practical
arithmetic course; hot lunches for rural
schools; and promotions based more
on the work during the term and less on
examinations, which the Minister re-
ferred to as a sort of "necessary evil that
will be removed as far as possible.

Waiter.—How will you have your steak,
sir?

Minister (absent minded).—Well done,
good and faithful servant.—Awgwan.

Hope's Quite Hour.

Look Up!

Unto Thee lift I up mine eyes, O Thou
that dwellest in the heavens.—Ps. 123, 1.

"A little tree, short, but self-satisfied,
Glanced toward the ground, then tossed
its head and cried,
'Behold how tall I am, how far the earth!'
And, boasting thus, it swayed in scorn-
ful mirth.

"The tallest pine tree in the forest raised
Its head toward heaven, and sighed the
while it gazed;
'Alas, how small I am, and the great skies
how far,
What years of space 'twixt me and yonder
star!'

"Our height depends on what we measure
by:
If up from earth or downward from the
sky."

To-day a friend of mine told me about
a talk she had not long ago with an

to talk about remembering God every
day and all day, but it is not an easy thing
to do in the rush of a busy life."

That is quite true, but—though we fail
again and again—we must never give up
the fight. Just think what the world
would be like now if our soldiers had given
up in despair when they were driven back
day after day!

As the world springs up gaily in its
new and eager life, after the winter torpor,
so we may make a fresh start every day.
I often get letters from melancholy
Christians who think they are making no
progress. Sometimes they are in despair,
thinking that they may have committed
"the unpardonable sin."

Sometimes the depression is more
physical than spiritual, caused by a
sluggish liver, or by too little exercise,
or lack of fresh air and sunshine. Some-
times the depression is caused by looking
too constantly at one's own soul.

Read the Gospels and you will notice
that our Lord was constantly speaking
of the Father and to the Father, and
His hands were full of the Father's gifts
which he wanted to share with every-
body. If you are feeling discouraged and
depressed look away from yourself en-
tirely. Self-pity is cowardly weakness.
Turn your back on your own troubles
and don't sit down gloomily to think
about your sins. Bring them humbly to
the foot of the Cross and leave them
there. Christ has power to forgive sins
and to cleanse our soiled souls; let us
accept His cleansing thankfully, and
rejoice because our sins are forgiven and
our debts paid. Is it reasonable to fret
miserably over a receipted bill?

This evening a paper was put in my
hands which contained the following
legend—a story of the middle ages.

"An angel was sent to Satan with the
message that God meant to take from him
all the temptations with which he had led
men astray. To this Satan resigned him-
self, because he was compelled to do so.
But he begged of the angel that he should
be allowed to keep one, and that a trivial
one. 'Which?' asked the angel; and
Satan answered 'Depression.' The angel
considered that depression was only a
very small sin, so he went back to heaven
leaving it behind him. 'Good!' laughed
Satan, as the angel vanished, 'in this one
sin I have secured all.'"

What is depression but faithlessness!
If we really believe that the all-mighty
God is our loving Father we shall know
that our souls and bodies are absolutely
safe in His keeping. We shall be happy
about our own future and about the future
of His other dear children. When our
Lord was leaving His chosen friends, as
sheep in the midst of furious wolves, He
said calmly: "They shall never perish,
neither shall any man pluck them out of
my hand. . . . and no man is able to
pluck them out of my Father's hand. I
and my Father are one."

To be afraid—for ourselves or others—
is to doubt His word. His power is
boundless and His love cannot be dim-
med. Though we forget Him He will
never forget us. If men can change
discarded refuse into valuable treasure,
surely God can work mightier miracles and
make shining saints out of blackest sin-
ners. I read in the "Outlook" for
January 6, 1915, that "the National As-
sociation of Waste Material Dealers,
assembled in New York at the end of the
first year of business, reported that the
value of the fragments gathered annually
in the U. S. amounted to seven hundred
million dollars. All of this wealth was
created out of waste." The seeds of the
cotton plant, which used to be burned as
refuse, are now valued at about fifty
million dollars." Cheer up! You are of
infinite value in God's eyes. He may
not show His love by indulgence but by
lessons which are hard to learn—but He
never makes mistakes; so there is every
reason for you to be glad as you walk
through life with eyes lifted to His face.

In the glory of the spring sunshine the
house, which looked reasonably clean in
the winter, calls out for its spring re-
novation. The earth is dressed in robes
that are fresh and new, and none of us
want to look shabby and old-fashioned.
Let us hold up our souls to the light of
God's Presence. The dark corners—
where sins of depression, fault-finding,
thanklessness, etc., have been lurking
unnoticed—should be thrown open for
the Master's inspection and cleansing.
This is what one person says about his
plan of soul restoration: "Now and then
I take my soul out of its cage. I smooth
its wings and brush away the dust.
Then I throw it up, to see how high it

From the height of perfect Manhood
our Elder Brother looks down and says
to us, His weak followers, "Lift up your
heads." Let us answer, with steady
purpose: "We lift them up unto the
Lord." Let us fix our eyes on our
Master's face so that He can guide us
with a look.

You may answer sadly: "It is very easy

can go. It flies up above the housetop, it circles round and round. It settles on a neighboring tree. It looks up, but the sky is so far. It looks down, the earth is so near. It is hard to soar, it is easy to descend; and so in a little time my soul comes fluttering down to me, and creeps into its cage again. My hope is in the Holy Dove, the Spirit of God Himself, that comes down to earth and bears my soul upon its wings to heaven."

The duties, cares and pleasures of ordinary life may—for a time—crowd out the remembrance of God; but, if the spirit often flies to its home in the Father's heart, it will come back refreshed and glad. The soul begrimed with earth's dust discovers that it has wings like a dove, and can fly away from care into joy, from weariness into rest, and come back glorified. "Though ye have lien among the pots," said the Psalmist, "yet shall ye be as the wings of a dove covered with silver, and her feathers with yellow gold."

"To stretch my hand and touch Him
Though He be far away;
To raise my eyes and see Him
Through darkness as through day;
To lift my voice and call Him—
This is to pray!"

DORA FARNCOMB.

Gifts for the Needy.

"M. Jones" will be glad to hear that the parcel she sent for Serbian Relief "has gone overseas to the destitute Serbians."

During the last week I received \$2.00 donations for the needy from "Ray," Mrs. K. and R. M. P., also fifty cents from G. T. H.

Sunday-school papers, and other literature for the shut-in, have arrived from many readers. These will be greatly appreciated by my sick friends. Thanks to you all!

DORA FARNCOMB,
6 West Ave., Toronto.

About Easter.

BY JESSIE M'CLURE.

It is confusing to some people to find that the date at which Easter comes is not a fixed one. For instance, it may be in March or in April, early or late in the spring. We should know why the date of this festive changes. Christmas is always December 25th, but we have to look up calendars or almanacs to find Easter. The word Easter is most probably derived from "Eastre," the name of a Saxon goddess whose festival was kept about the same time as Easter. The word "Eastre" literally means "rising," or "to rise."

The sun crosses the equator on 21st March, and we have then the spring equinox. Easter Day is always the first Sunday after that full moon which comes upon or next after the 21st of March, which was the beginning of the old church year, the full moon being understood to be (though not accurately) the 14th of the calendar month. If the full moon comes on Sunday, Easter Day always is the Sunday after, and the Friday preceding it is, of course, Good Friday.

Good Friday is so named because it was a good thing for the world that Jesus died that day upon the cross for all peoples.

In the ancient church the celebration lasted eight days, but in later times it was limited to two or three days. It was a festival of pleasure; alms were given to the poor and slaves were often freed. Daily services were held during the whole week before Easter, and on Easter Day the people greeted each other with a kiss, saying, "He is risen," to which the reply was made, "He is risen indeed." This custom is still kept up in the Greek Church. In Russia to-day even the Czar will not break with this ancient custom, but will so greet and salute even a humble peasant.

The custom of exchanging eggs as a symbol of resurrection or renewed life is very old, as is also the custom of eating eggs on Easter. When we think that the egg contains a new life, the germ of which is carefully hidden away beneath the shell, we are reminded that by His glorious and triumphant rising from the tomb Christ opens up a new life for us beyond the grave. For it is written:

"But now is Christ risen from the dead and become the first fruits of them that slept."—Onward.

Our Serial Story.

The Forging of the Pikes. A Romance Based on the Rebellion of 1837.

Serial rights secured by The Farmer's Advocate and Home Magazine.

CHAPTER XIX.

Concluded.

But at last the handshakings were over, and we entered the church, I well pleased that it was still early enough so that I could look about at the people in the pews and as they came in. Some of them I already knew by sight, for in a place like this celebrities are soon pointed out; and any deficiency in my knowledge in regard to the rest was rectified as rapidly as might be by Nora, who kept whispering to me behind her prayer-book until set in place by a look from her mother. So I soon came to know where sat the Baldwins, the Powells, the Jarvises, the Ridouts, the Cawthras, the Boultons and many others, including the Chief Justice Robinson, who is one of the handsomest men I have ever seen, very "patrician," as Kate says of him, with clear-cut features and a bearing that might well become a prince of any land.

Especially was I interested in looking at the face of Mister Baldwin of whom I have heard so many good words spoken as long as I remember, and I found his

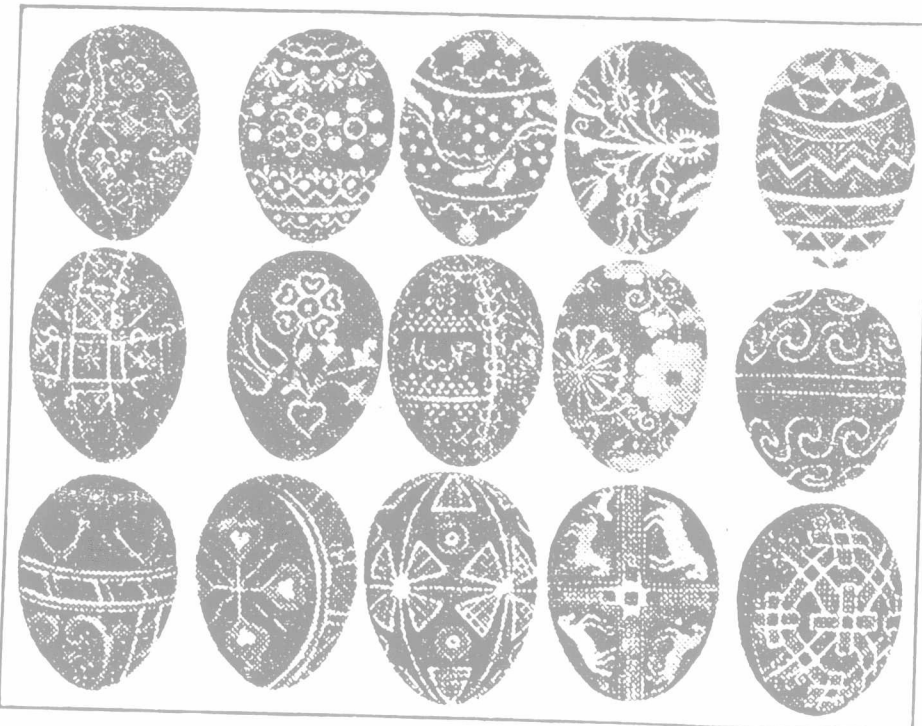
ostentation, so that the whole church must know some personage was entering.

"So that's Sir Francis Head!" I exclaimed, to myself, and was gratified that he sat in such a position that I could observe him closely.

A handsome man, no doubt most people would call him, although it seemed to me that he had a light, supercilious air, with an eye that roved over-much, and a thin-lipped curved mouth that reminded me of "Pinky's" "rosebud."

The ladies who accompanied him were very fine birds indeed, in very fine feathers; but neither among them nor among the young ladies in the transept who came in a body and who, Nora informed me in a whisper were from Miss Somebody's school, did I find a single one that for beauty and grace could compare with Barry. Like conservatory plants they seemed to me, and I could not think of them but in a setting of velvets, and furnishings, and candles alight in candelabra, as in my uncle's house, while the very name of Barry was sufficient to call up, along with her, all the joyous, wild beauty of Nature, than which nothing else in all this world, I do believe, can be so sweet and fair.—And yet very attractive, too, were these dainty buds in their rustling silks, and none more so than my cousins who sat beside me in the long pew.

"Here comes the processional!" whispered Nora to me, in the slight confusion caused by its entrance, and then, as the end of it came in sight, "Yes, Dr. Strachan's going to preach."



Curious Samples of Easter Eggs Decorated by Peasant Women in Brittany, Western France.

expression very kindly and benevolent, befitting the good reports of him. Of Doctors Rolph and Morrison and Mister Bidwell I saw nothing, and, indeed, have forgotten since to ask whether they go to this church, although I intended to do so.

And then I spent a moment or so in looking at the military officers, who sat in a long pew reserved for them on the West side of the Governor's, the corresponding one on the east side being reserved for such members of the Assembly as choose to use it while the House is in session. The military officers present were very well set up men, very brilliant and soldier-like in their scarlet uniform, with braid and epaulettes, but they were comparatively few in number because of Sir John Colborne's having had all of the militia removed from here to Kingston, (as I have already noted) for what reason no one knows, although it is said by some that he wants to have them more at hand in case of an open outbreak in the Lower Province.

So I sat there, all eyes and ears, and more than once I found it hard to realize that I was now actually looking, with my own two eyes, upon so many of those men of whom I have so long heard—of some good report and of others far from good—and all the while I kept my eye especially on the Lieutenant-Governor's pew lest I should miss the first sight of him.

I need not have feared that, however, for at the very last minute he came in, with his company with great air and

—Whereupon once more I had to look sharply, for of this man also I had heard much.

"I'm right in the midst of the Family Compact," I said to myself, wondering almost, that these men looked like ordinary kindly citizens instead of like ogres and ravens wolves as my boyhood fancy, in earlier years, had pictured them.

"Keep an open mind," my father had said before I left home, qualifying it with "But, mind you, don't get swept off your feet," and so, when the service was over, which I had much ado to follow, and could not have followed with credit, had it not been for Nora's surreptitious tuggings at my coat-tail and nudgings against my arm, I settled down determined to miss no word of the sermon.

I may here note that "The Honorable and Right Reverend John Strachan, D. D." is a somewhat short man, with a rather fine head and a very unaffected manner, not at all the sort of personage one would expect to see riding about in a grand coach fit for the Pope, and living in a mansion which is a real palace compared with any other house in Toronto. I saw it the other day, when down by the bay, and admired it much, and especially the very fine grounds which surround it.

Nor when he preached could I see anything amiss with his doctrines, or anything that could have offended even The Schoolmaster himself. To all appearance

he was just a man of great common-sense, who argued—without much eloquence, it is true—for a sane well-regulated life. When the sermon was over, and I tried to sum up what The Schoolmaster would have thought of it I knew he would have said that it lacked "vision."—As for me I have no great knowledge of these things, and less experience, and so perhaps, am no rightful critic. But it was hard for me to connect the reverend doctor with the Family Compact's doings in the fashion in which I have heard him represented.

On the way home Uncle Joe walked with me.

"Well, boy, what did you think of the discourse?" he asked.

"I liked it very well," I said.

"What! And you didn't get even a glimpse of horns or hoof?"

"Never a glimpse," I laughed. "If the Reverend Doctor has them he keeps them pretty well covered."

Evidently my uncle admires the Rector with all his heart. "There isn't a man of more ability in the place!" he said, quite enthusiastically.—"There's no molly coddle parson for you, with eyes rolled up and tongue dingin' out ancient history until ye're scunnered, with it, and no interest at all in anything but the Church."

Is there anything to be done about the hospital he's there. Go into the schools almost any day in the week and you'll likely find him there. Is there a patriotic meeting called, he's right on the spot. Is there a knot in the Legislative Council that needs to be untied, he's the one to do it.—Yes, that's a fact, and don't you smile, you young spalpeen, or by the powers I'll knock you off the sidewalk!"

At that I burst out laughing.

"I wasn't smiling, sir," I said, "not even a little bit."

He gave a little "Ahem!" and I saw that his merry blue eyes were twinkling. "You weren't, hey? All right.—You see I thought I'd got me foot in it again.—I know the sort of pap you were brought up on, me boy, politically speaking. Ginger and pepper, by Jove!—Pap flavored with ginger and pepper! That's a good one, but you know what I mean."

Now, to return to the Doctor,—he's feathered his nest, of course. But he's a financier, man,—a financier! How many of 'em wouldn't do it, with his ability? Tell me that? And it's the same with a lot more of 'em that that pestiferous little scallawag Mackenzie's been railing at for the last ten years! They're financiers, man,—financiers! And they're building up this city! There isn't a man in Upper Canada better for Toronto than this same little man you heard preaching this morning!"

"I quite believe it, Uncle," I said, "but what about the rest of the country?"

"Oh there's a lot of rascallions all over the country that 'ud be making a howl anyway. You can't put city advantages out into the backwoods in the wink of an eye. Lord bless you, man, a country has to grow! It has to grow, sir! But some of 'em want to run a Marathon before they've well learned to creep. One thing about your father, Alan, he's more reasonable than lot's of 'em. We come to blows, politically speaking, he and I, every time we meet, though it hasn't gone any further than that yet, thank the Lord!—he could roll me around like a plum pudding.—But he at least has the sense to stay home and not go traipsing about on platforms, or waving a fool motto in a procession. Tear an' ages, Alan, but it sets me rampagin' to see those fool mottoes! They make me know just how a bull feels when he sees a red rag walloped about just to tantalize him."

"Father always kept clear of being very radical in anything," I said.

Uncle Joe nodded.

"He's Scotch," he said, "and canny, thank the Lord! And I'm glad to see, boy, that you're a little like him in that respect. Keep your eyes open my boy, and make up your own mind about things. You'll meet more of 'em—these black-headed devils, I mean—while you're in the city; Octavia and I'll have to give a few dinner parties soon to get even. But I think you'll not find 'em such a bad sort after all."

And then he raised his cane, which was clicking along over the stone flags and made believe to poke me with it.

"But by the Lord, young fellow," he added, "if you dare to open your yap and get off any radical stuff at my

dinner party will!"

—Which my uncle is to talk politics to me, and I long off the his temper of me soundly are like a never failed telling me for me if I

I hold it he has never drillings in knows that country, as Indeed it se to think of boys practicing little hole themselves a the whole m even laughed may be, how fears more and the fell

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dinner parties I'll disown you! That I will!"
—Which alarmed me not at all, for my uncle is good enough often to lead me to talk politics with him, young though I am, and indeed, finds it hard to keep long off the subject, albeit he has lost his temper once in a while and berated me soundly. His tempers, however, are like a flash in a pan, and he has never failed to apologize afterwards, telling me that he wouldn't give a fig for me if I hadn't opinions of my own.

I hold it much to his credit, too, that he has never questioned me as to the drillings in our district, although he knows that such are afoot all through the country, as does almost everyone here. Indeed it seems to me almost pathetic to think of The Schoolmaster and the boys practicing away after nightfall in the little hole in the woods and fancying themselves all part of a great secret, while the whole movement is known here and even laughed at by the Government. It may be, however, that The Schoolmaster fears more the interference of Big Bill and the fellows from beyond the Ford.

Such preparations, Uncle Joe thinks are all bluster,—the opinion that, he says, is held by Sir Francis Head, Chief Justice Robinson, Attorney-General Hagerman, Judge Jones and many others, and must be by Sir John Colborne also since he has felt safe to remove the troops. I have taken occasion to question my uncle, too, as to what the leading Reformers here have to say about it all, and especially Mister Baldwin and Doctors Rolph and Morrison, all of whom he knows. They, too, he says, though far from being satisfied with the way that things are being conducted by the Government, take small account of Mackenzie's doings, and, indeed, rather disassociate themselves from him, while pressing the justice of much that he affirms.

"But, of course," concludes my uncle, "there must be such differences of opinion, so long as there are two political parties," —which sounds to me as though he considers that opinions are manufactured by political parties instead of the parties being created by opinions. This, I fear, may be sometimes the case, and all the more do I see it since coming to this place.

"Why don't you try to get nose into public affairs, Uncle Joe?" I asked him the other evening, as we sat before the fire in the living-parlor. "Why don't you run for the Assembly?"

"I've no taste for the like at all, my boy," he said. "Twenty years ago I decided to give my life up to healing sick bodies, and I've never regretted it. I have found that a work that needs all my time—and more if I could find it. Sometimes I've wished I had ten bodies instead of one, so that I could send them all on the job. —Besides, boy, I've no talent for politics—'statesmanship' is a word I like better. I'm too likely to lose my head—in everything except the doctoring—and I'm no speaker, although"—and his eyes began to twinkle—"I can express myself with fair emphasis on occasion."

I laughed, but said nothing, and he continued to puff at his pipe for a moment. Then, the merry mood upon him again, he turned to me, taking his pipe from his mouth and holding it at arm's length. "Of course," he said, "if ever the Assembly needs an extra escape valve to let off the steam, why I might apply for the job."

"I understand, sir, it's a stormy enough spot, at times," I said. "You're right, my boy, You'll have to attend some of the sessions. It's all a part of your education. Perhaps, some day, you'll be able to do what your uncle can't."—Then, suddenly recollecting himself—"But by gad, sir, you're on the wrong side of politics!"

A few moments ago, after finishing writing the above, I put out my candles and went to the window and looked out at the bay, this night all moving restlessly like some troubled living thing, and all flickered with silver, although darker than the land between because of a light covering of snow that has fallen upon the withered grasses. But not long was this picture present with me for the external eyes become blind and refuse to see when the eyes of the memory and the imagination began to work. And so it was that shortly I was looking, not

upon the restless bay and white ground, but away over the dark hills and forests, —on and away until my soul hovered first above the Golden winged woods, then saw the dear farm with the little home in the heart of it, all dark in the night save for a flickering glow at the tiny window. The next instant, through the window, I saw my dear mother and father. In imagination I pressed my face against the glass and beheld them sitting there, side by side, before the fireplace, in which my father had piled logs until the flames filled all the cavern and lighted all the little room, playing most of all on the sweet face of my mother, crowned by its ripple of brown hair. She was stringing wild apples for the drying, and my father was coring them and making them ready for her, and although their lips moved I could not hear what they said.

After that a sadness fell upon my heart, and I knew that the memory of Barry was creeping into it. . . Where was she this night? Was she 'happy and well-cared-for? Why had she passed me as I slept, without other sign than the dear, yet tantalizing pateran that stopped ere it had well begun? . . . I saw her again clearly as I had ever seen her and heard her laugh. There in the Golden Winged woods was she, with her crimson scarf and flowing hair all bound with the little vine of green. And then she disappeared, and I saw only the misty troubled bay and the ghostly snow. "Some day she will come to this place," I said to myself, as I had said a thousand times before, and I knew that until that day I must still keep watch, looking into the face of every woman, and straying into every place where people congregate. Me, perhaps, she will never want, yet some day it may fall to me to be her friend.

Turning from the window I lighted my candles once more, that I might write this. Now I must go to my bed but I fear I shall not sleep.

To be continued.

The Fashions.

How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

When ordering, please use this form:—
Send the following pattern to:

Name.....
Post Office.....
County.....
Province.....
Number of Pattern.....
Age (if child or misses' pattern).....
Measurement—Waist.....Bust.....
Date of issue in which pattern appeared.....

A Mistake About Patterns.

By a mistake in the printing April 3 issue, an old heading was placed beneath "The Fashions."—The prices of patterns are as given beneath the short description of each number. Unless otherwise requested the extra money from those who have sent 15 cents will be held to their credit on another pattern, which will be forwarded on instructions as to number, size, etc.

2788. Ladies' Dress.

Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 44-inch material. Width of skirt at lower edge is about 2 yards, with plaits extended. Price, 10 cents.

2792. Girls Over-Blouse Dress.

Cut in 5 sizes: 6, 8, 10, 12 and 14 years. Size 10 requires 3¾ yards of 36-inch material for the dress, and 1¾ yards for the over-blouse. Price, 10 cents.

2642. Ladies' Apron.

Cut in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; and Extra Large, 44-46 inches bust measure. Size Medium will require 2½ yards of 36-inch material. Price, 10 cents.

2637. Girls' Dress.
Cut in 4 sizes: 4, 6, 8 and 10 years. Size 8 will require 4¾ yards of 27-inch material. Price, 10 cents.

2793-2796. Ladies' Costume.
Waist 2793 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 2796 cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. It will require 2¾ yards of 44-inch material for the waist, and 3 yards for the skirt, for a medium size. Width of skirt at lower edge is about 2 yards, with plaits extended. TWO separate patterns, 10 cents FOR EACH pattern.

2795. Girls' Dress.
Cut in 3 sizes: 12, 14 and 16 years. Size 14 will require 4½ yards of 36-inch material. Price, 10 cents.

2774. Ladies' House Dress.
Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5¾ yards of 44-inch material. The dress measures about 2¼ yards at the foot. Price, 10 cents.

2787. Boys' Suit.
Cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 will require 1¾ yards of 27-inch material for the blouse and 1¾ yards for the trousers. Price, 10 cents.

2613—Here is a Popular Suit for Your Small Boy.
Cut in 4 sizes: 2, 3, 4 and 5 years. Size 4 requires 3¾ yards of 27-inch material. Price, 10 cents.

2767—Ladies' Combination.
Cut in 4 sizes: Small, 32-34; Medium, 36-38; Large, 40-42; and Extra Large, 44-46 inches bust measure. Size medium requires 3½ yards of 27-inch material. Price 10 cents.

2320—Girls' Dress with or without Jumper.
Cut in 5 sizes: 4, 6, 8, 10 and 12 years. Size 10 requires 2¾ yards of 44-inch material for the dress, and 1¾ yards for the jumper. Price, 10 cents.

2751—Ladies' Dress.
Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5½ yards of 36-inch material. Width of skirt at lower edge, is 1¾ yards. Price 10 cents.

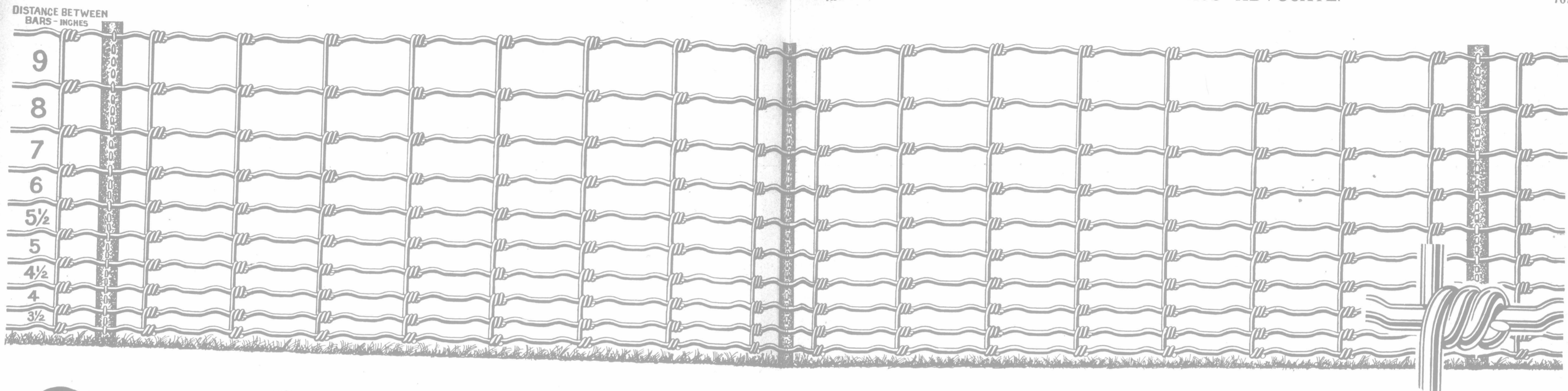
2744—Child's Dress.
Cut in 4 sizes: 2, 4, 6 and 8 years. Size 4 will require 2½ yards of 40 inch material. Price 10 cents.

2592—Ladies' House Dress.
Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5 yards of 44-inch material. The dress measures about 2¾ yards at the foot. Price, 10 cents.

2759—Girls' Dress.
Cut in 4 sizes: 8, 10, 12 and 14 years. Size 12 will require 4½ yards of 27-inch material for the dress and 2¼ yards for the jumper. Price 10 cents.

2764-2761—A Trim Business Costume.
Waist 2764 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 2¾ yards of 36 inch material for a medium size. Skirt 2761 is cut in 7 sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 24 will require 2¾ yards of 44 inch material. The skirt measures a little more than 1¾ yards at the foot. TWO separate patterns 10 cents FOR EACH pattern.





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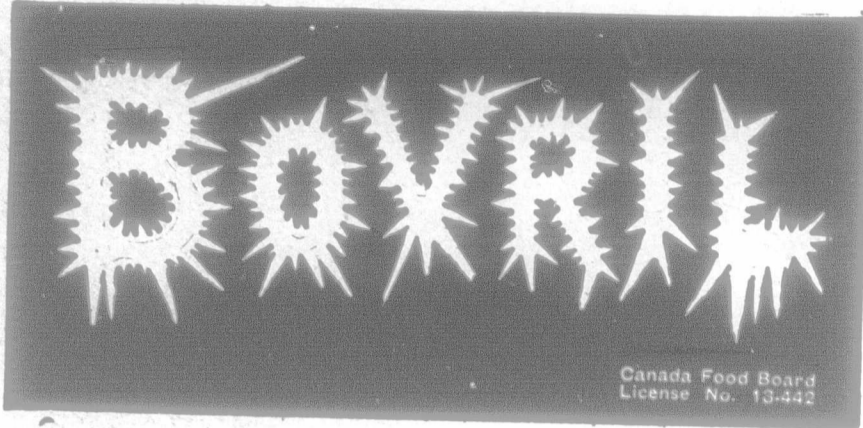
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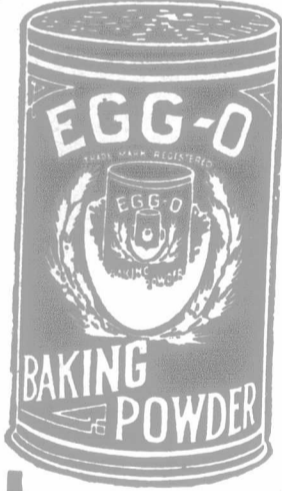
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The Easter Lilies' Message.

BY AGNES HUNT.

NAN Barton sat in a low rocking chair beside the fire.

She was apparently watching the white steam-clouds floating ceilingward, but her thoughts were far away in her Old Ontario home, which she had left just two years before.

All day a storm, half sleet, half rain, had driven against the windows. At sunset it had ceased, but the wind was still high and at every blast the small log-house shook, and doors and windows rattled.

The "clap, clap," of horses' feet and the rumbling of wheels was heard distinctly as the wind paused to gather strength for a fresh blast, and she sprang up, humming a snatch of song, and lighting a lantern, carried it to the door, with the glad cry, "Home at last David!"

The wind whipped her skirts about her, almost carrying her off her feet, and she drew a long breath as the door again shut out the searching blast.

She lighted the lamp and peeped into the oven. The whole room was permeated with the savoury aroma of the hot appetizing food inside.

"I'm famished!" David greeted her. "Haven't had a bite since I left. I ran across an old friend from home to-day,—Billie Rogers, you remember him? Used to travel for the—Co."

Nan nodded soberly. Billie Rogers had never been quite the sort of friend she had wanted David to have.

He took off his great coat, shook the ice from his cap, and washed himself at the low bench near the door.

"Nothing done outside, I suppose—as usual?" he queried from the depths of the crash towel.

The red surged into his wife's face and she drew a quick breath.

"Nothing," she answered, quietly. "It's great to be a woman!" he commented drily.

It was the first time he had ever spoken so to Nan, and sensitive as she was, she was sorely hurt.

He was a fine specimen of manhood this muscular young giant, lithe, straight and handsome too. To-night, however, his dark eyes were dull and lustreless, and his mouth lacked its usual smiles of good humor.

Something was wrong, Nan told herself, and with rare tact she tried to appear blind to the fact.

The good supper failed to cheer him for he ate almost in silence, then rose abruptly and went to the barn.

Her work finished, Nan gazed out into the night.

Everything had been transformed as by a fairy's wand. The alder bushes encircling the little clearing were sheeted in glistening ice; the plowed land gleamed in the moonlight like a choppy sea; the road stretched a broad band of silver.

Overhead ragged bits of cloud flew over the face of the moon, the stars twinkled here and there, but she was blind to the beauty of the scene before her.

David had implied that she had not done her share of the work when time and time again he had told her she must not attempt the outside work.

What could be wrong! Then the thought of Billie Rogers came to her.

If David hadn't reformed she would think—but no! She must never even think of such a thing.

Had she been herself, she with her bright optimism and sunny nature would never have given the disagreeable speech a second thought. She simply would have attributed it to irritability. But she was not herself lately. Often she cried over the most trifling things and magnified mole-hills into mountains.

She turned to the piano and her fingers wandered softly over the keys.

When David entered, a little later, moody and wholly ashamed, the notes of "Home, Sweet Home" greeted him.

He pulled off his heavy boots and stretched his feet to the fire, finally asking, "Homesick Nan?"

Nan swall wed the lump in her throat and swung round on the stool.

"Why no, David. I wasn't thinking of the old home, but of this, the new home.

For a time he sat silent, gazing moodily into the fire.

"I never should have brought you here," he said at last. "You're as much out of place on a bush farm as that piano of yours is beside my home-made furniture."

"Why David, you great silly boy! I am happy as a queen, and own up,

you'd miss both the piano and me. As for these things, you have made, I love every bit of them and shall prize them even when we can afford mahogany. Don't forget the work you have done here in clearing the land and building our little home, has done more than develop muscle. I'm proud of your broad shoulders, proud of what you've done."

"You're an artist, David, no less. Some day we will see the completed picture and to us it will be a masterpiece, well worth all your hard work."

She had drawn his head back against her as she stood behind his chair, and her fingers played in the mass of dark hair.

Then gaily, "Do you know what comes in a little more than a week?"

"Easter, of course"—shortly. "More than Easter, David,—our wedding anniversary."

"Do you remember the Easter lilies and the big quiet church?"

But David did not answer and her voice ran on quietly.

"I can smell their sweetness yet, David, and ever since that day Easter lilies mean so much to me."

"When we are a little better off, do you know, I shall always have Easter lilies for our wedding-day."

"I was the proudest, happiest girl in the world that day."

"Weren't you afraid to trust yourself to me after?—his voice was husky.

But she interrupted him. "Not a bit, David, I knew the day you left me you would keep your word and win out."

How sure she had been of him! Just now he was not so sure of himself. To-day the thirst he had thought dead had come to life again. It had only lain dormant. He knew a fresh battle was imminent. He had been to blame.

Why had he not been brave enough to refuse when Billie Rogers had proffered him something to keep away the "flue" in the privacy of his room at the village hotel. If he had only never met Billie Rogers!

"Now David,"—her voice was coaxing—"I know there is something wrong to-night. Isn't there, and won't you tell me all about it?"

"Yes, Nan, there is. It's money again to begin with. One of my machinery notes falls due in a day or two and since I lost a horse and the frost ruined my crops, I can't pay it. The company won't renew my note as it's the first payment. To-day I tried to hire the money and got turned down everywhere."

"Don't worry dear. It will all come right, somehow or somehow. It always does."

But David shook his head. "You've more faith than I have, Nan. Somehow I've lost my grip—lost faith in both God and man."

"Hush David! Don't say that!" And she drew his head back and pressed her lips to his forehead.

But before she slept, Nan found the clue to her husband's despair. In closing up the house for the night she brushed against his inner overcoat. It slipped from the peg and fell to the floor and in hanging it up again she found—a flask of whiskey, as yet untouched.

With sudden horror she pushed it from her and overcome with grief and sudden fear of what the future might have in store for her she buried her face in her shaking hands and gave vent to the tears that could no longer be kept back.

Afternoon of another day and David stood alone on the icy bridge just outside the town—weak and irresolute.

The flask he held in his hand. A demon within was urging him on to drown his discontent and troubles in an hour's oblivion. A maddening thirst tormented him. Great beads of sweat stood out on his forehead, his limbs trembled under him.

Suddenly his wife's words came to him: "I knew you would keep your word and win out."

Words of perfect trust, they proved his salvation. Raising the flask suddenly he hurled it against the rocks beneath and turning walked swiftly back to town.

"Hi David! Hold on!"

Recalled to himself he turned about. A neighbor was racing down a side street. "You're wanted at home, Dave."

"Why, what's wrong?" David faced him.

"Your wife has been hurt. Fell somehow or other. Dr. Brown left for there some time ago."

Without a word his horse. The man his thirst for the alike forgotten.

Never had the Many turned an after him, driving seeing the road over horse, guiding it as

A terrible fear his Nan, all he had hurt, how badly, and her!—oh God yielded!

Again he felt he and heard her word him. "Poor little brokenly; then fier I was!"

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Without a word David strode after his horse. The money so sorely needed, his thirst for the burning liquor were alike forgotten.

Never had the miles seemed so long. Many turned and gazed wonderingly after him, driving so recklessly, scarcely seeing the road over which he urged his horse, guiding it as if by instinct.

A terrible fear gripped him. Nan, his Nan, all he had in the world, had been hurt, how badly, he could only guess, and her!—oh God! What if he had yielded!

Again he felt her kiss on his forehead and heard her words of perfect faith in him. "Poor little Nan!" he whispered; brokenly; then fiercely, "What a brute I was!"

The home-light glimmered at last and for the first time since his marriage no one was at the door to meet him.

Housing the jaded, steaming horse hurriedly he entered the house.

Mrs. McCallum, motherly and white-haired, the good angel of the Settlement in sickness and death, was busy about the fire over steaming kettles.

"What's wrong?" David demanded. The old lady held up a warning finger as she came close to him and whispered:

"The Doctor's wi' her noo. She's nae better, nae warse." Then she added gently; "She was oot tryin' tae dae the chores, silly wean, and slippit on the ice. Luckily 'twas, I got oneasy at seein' nae smoke and rin ower, and there she was a-tryin' tae get tae the hoose."

"Dinna gang up till ye're warrum," she warned him.

But he scarcely heard the warning. Every word stabbed him to the quick. If he could only recall those cross words, the cause of everything!

Nan lay upon the pillow, her face pale and drawn with pain, but she opened her eyes as her husband knelt beside her, and with one trembling arm drew his face close until her lips rested upon his. He knew her fear, and rejoiced that his breath was free from the odor she dreaded. Her fears had been for him rather than for herself, and with a sigh of mingled content and utter weariness, she lay back and closed her eyes.

"Forgive me dear, I was a brute," he whispered and she pressed his hand otherwise making no sign.

Dr. Brown followed him outside. His face was very grave but he laid a kindly hand on the young man's shoulder after he had told him of his fears, and bade him keep up his courage.

He would do all in his power, and Mrs. McCallum, he declared, a born nurse and worth her weight in gold in any community. "Just go to the barn and get busy," the Doctor advised. "If you are needed we will call."

Going about his work the hours dragged drearily for David. As a drowning man sees his life pass as in a panorama, so he recalled the past.

His mother had died when he was born. A wealthy uncle had adopted and educated him. There was wine constantly before him and when his liking for it grew and he took it to excess, it was at first overlooked. Finally the habit deeply inrooted, he was cast a-drift. Nan had already come into his life and was the one bright spot in it, and because of her belief in him and his great love for her, he cut loose from all his associates and fled to the solitude of a bush farm in New Ontario. He would conquer or die he had promised her.

When the awful thirst came upon him he fought it out axe in hand.

For one reared in luxury the life was strenuous, but with grim determination he stayed by the task he had undertaken. He worked often far into the night until utterly exhausted. Bravely he fought the curse with aching muscles and blistered hands. For weeks he dared not visit town, but finally the victory had been won. He ate heartily and slept deeply and believed the curse had been driven from his blood.

The home he built was humble but wild roses grew at the door and great trees sheltered it.

Nan, in face of her father's great anger met him at T—, and on an Easter Monday, in one of the great city churches among the Easter lilies, linked her life fearlessly with his.

What a good comrade she had been, cheering him when he was down-hearted, taking the bitter with the sweet in their hard pioneer life and never finching.

When there was plenty she was gay; when want faced them she was brave.

He had been too sure of himself for though the town like all others was "dry" still he knew dozens whose cellars were well stored. Billie Rogers always carried it, and fearing being laughed at he had slipped the flask given him into his pocket thinking himself strong enough to resist temptation.

From house to barn, from barn to house he paced, backward and forward, fighting his battle with despair.

"Nan must not die," he cried fiercely. Then with a pang of remorse he added, "If she does it's because I'm not fit to keep her."

Was God, he wondered, the loving Father she believed Him or was He a judge, meting out strict justice. In justice she would be taken but no loving Father could deal him a blow like that.

Then David in his trouble became once more only a boy, a great boy, his heart breaking with sorrow, and lifting his face to the star-sprinkled sky, he prayed,—prayed for strength to overcome his terrible thirst, and that God would spare him the one being in the world who loved him.

Inside Nan was very deep among the shadows but the Doctor and his trusty helper never gave up. Valiantly they battled with Death and with the coming of day a tiny soul was ushered into the world and a life was saved. Outside, faith had been born anew.

On the threshold David paused, electrified. Mrs. McCallum sat in front of the fire a bundle in her lap. The wailing of an infant rose fitfully. With every nerve tingling, shaken and trembling he confronted the startled old lady.

"Will she live?"

Something of the anguish he suffered showed itself and her kind old heart warmed to him.

"Surely she will laddie. She's doin' brawly. And see, mannie, ye've a wee son, and a fine bairnie he is. Look at the breadth of his shoulders! Is he no fine? It's a proodmon ye should be this night."

"I'll just be givin' him a bit bath, but stay, dinna gang up till ye're telt." The tiny red morsel of humanity gave spasmodic cries as the water was applied by a vigorous hand, and flung out his tiny arms in protest, but little did Mrs. McCallum heed. Had she not handled babies for forty odd years!

Her dexterity was born of experience, and greatly did David marvel as he watched here deftly adjust bands to her liking, smoothing her and straightening there until in a twinkling the child was fully dressed. Wrapping a shawl about him, she laid him in David's arms.

"Take the bairn tae his mither," she commanded.

Dr. Brown had gone, perhaps to snatch only a few moments of rest ere another call should come.

Below stairs Mrs. McCallum moved about voluntarily installed as nurse so long as she should be needed.

Tucked close beside his mother, her face against his soft downy head lay Master Babe. Very dissatisfied was he. His tiny mouth searched his blanket up and down continually, and sundry baby grunts told of his displeasure. Finally Mrs. McCallum entered.

"I'll just gie him a wee drop of whiskey in some sweetened water," she commented, "Then he'll sleep."

But David interposed. "No, Mrs. McCallum, not a drop of whiskey if he cries all night."

The old lady left the room in high dudgeon, muttering something about, 'youn folk thinkin' they kenned mair than thir elders."

But Nan smiled and understood.

A great Easter lily in full bloom beside her bed greeted Nan when she opened her eyes on Easter morning.

"Is it really real David?" she queried. "Smell and see," and he held the fragrant blossoms to her.

"Some letters came last night, dear," but you were asleep so I didn't waken you.

"This is from home, I think." Hastily she tore the letter open. A crisp cheque fluttered out, at sight of which she uttered a glad cry.

"Good-bye to money troubles now, David."

"Now Mr. Doubter, will you ever doubt again?"

"Never," said David gravely. Nan was still reading the letter. "It's from father," she announced joy-



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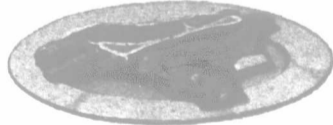
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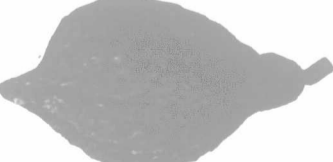
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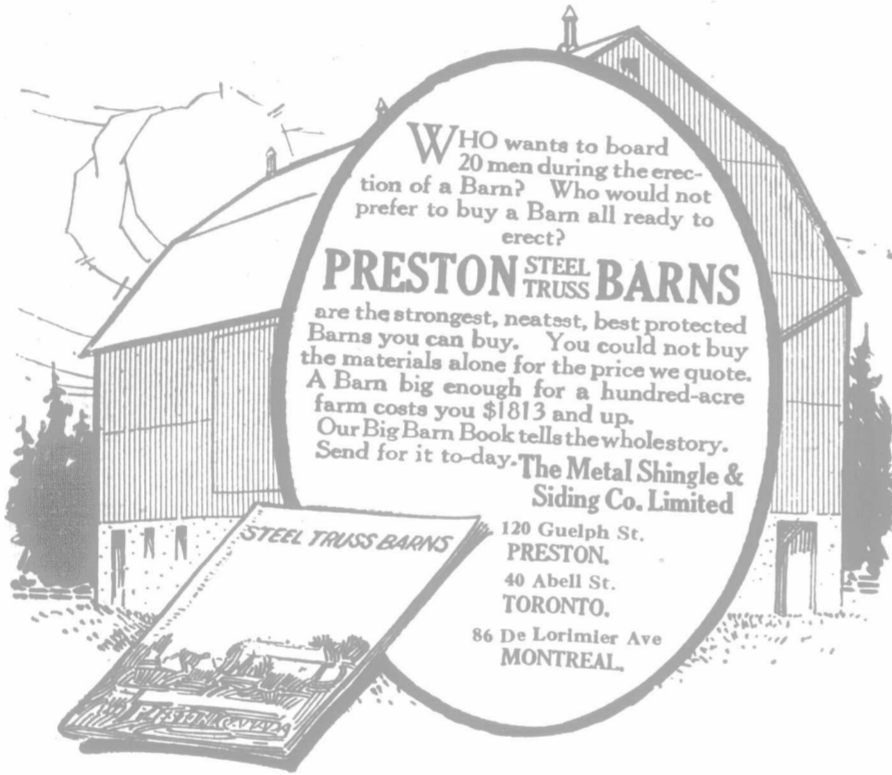
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are the strongest, neatest, best protected Barns you can buy. You could not buy the materials alone for the price we quote. A Barn big enough for a hundred-acre farm costs you \$1813 and up. Our Big Barn Book tells the whole story. Send for it to-day.

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Size	Plain	Non-Skid	Size	Plain	Non-Skid
28x3	\$10.50	\$11.50	36x4	\$26.00	\$29.20
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32x3 1/2	14.50	16.70	34x4 1/2	27.00	35.00
31x4	20.20	24.25	35x4 1/2	28.00	38.00
32x4	21.40	25.65	36x4 1/2	29.00	39.00
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34x4	23.40	28.10	36x5	35.00	45.00

Tubes 30x3 1/2 Fully Guaranteed, \$2.50 each.

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fully. "He's so proud of a grandson named for him that he has forgiven us both, and oh David! Mother has sent a big box of Easter lilies. We'll get them in time for our wedding-day too."

The letter dropped from her fingers and her eyes grew very wistful and tender. "They have a new meaning for me this year, for they have brought peace as well as a great gladness to us both." "And for me, too, they have a message Nan," said her husband softly. "They tell of a resurrected faith."

ected with the syndicate through which his writings are issued.

And now perhaps you are asking, "What is he like? What was your impression of him?"

Can you picture a slight, young man, somewhere in his thirties one would judge, straight and pale, with regular features, and very smooth hair, and brilliant eyes that, when you were near enough to see, burned and softened as he spoke?—I think he would have felt more at home, after four years of wearing it, in his khaki tunic than in his very immaculate evening dress. His voice was placid, but he had the movements of a shy man. He is, as he says himself, "a writing man." He had none of the gestures of an orator. His voice was, perhaps, a bit monotonous, and for this reason some folk confessed themselves "disappointed."—Could they not see, in spite of that, the bigness of the man himself, and recognize the beauty of his language, and perceive the tremendous import of his self-imposed task? It made one rather furious to hear these people dismiss him so casually, and made one pause to wonder whether they could ever get beyond demanding the gestures and facial contortions of the movie actors.

The Ingle Nook

Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

A Great Englishman.

THANK Heaven for Philip Gibbs! That was one's thought upon reading some of his recent writings upon the War, about which, now that the time for censorship has been passed, the whole truth can be told.—It was gruesome reading, terrible reading. He told, and is telling, week by week, of things awful beyond the words of ordinary men. But Philip Gibbs is not an ordinary man. He possesses a pen of magic that can reproduce for others, not only the scenes upon which he has looked, in all their coloring, but the very emotions which held possession of him as he looked upon them. He can give us War in all its horror, shorn of glamor, and tinsel, and senseless glorification.—And so thank God for Philip Gibbs!

For it is only by realizing how horrible, and ghastly, and cruel, and senseless, and sordid, and unromantic War really is, that mankind can ever be brought to build up firm walls against its ever happening again. . . . The fighting men who come back are, for the most part, dumb upon all these things. They haven't the words. They want to forget. They seem to have a queer little feeling that it is only a "piker" who will grumble much about the hardships—the awful hardships—through which he has gone.

But Philip Gibbs has the words—words all bound with fire, and blood, and the naked souls of men when he chooses to use them; and, moreover, he has set himself to be one of the instruments in killing War itself. All through those four ghastly years he walked to and fro through the fighting—armed with a pen instead of a rifle, yet sharing all the dangers—talking with the Boys, going into the trenches with them and out with them, standing where shells were falling, with those wide-open eyes of his watching, watching, and the soul of him saying "I will tell all this to the world. I will make it see War, so that it will turn from War for all time in the future with a awful hatred and dread.—I think it was this spirit which upheld him through those long months of horror and weariness, and danger.—Yes, personal danger every day, for he was one of the very, very few war correspondents permitted to go everywhere, and to see War itself and not its effects only. The British Government knew Philip Gibbs, and knew that he was to be trusted not to say the wrong word during those days, and weeks, and months, and years of peril.

Two weeks ago from this time of writing I sat literally at his feet, for I was in the front seat not ten feet away from him, and heard him tell something of the story, dwelling chiefly upon the indomitable and wonderful courage of the Boys, and the bits of comedy as well as tragedy along the way. He could not present the whole picture, with all of its ghastliness and sickening agony before that audience of women and children as well as men; and I wondered at his facility in selecting the right word and the right incident. But when he sits down to write there are no such restrictions, and so you, who had not the chance to see him and hear him personally, have yet the opportunity to get everything he has to say. Several of his books have been already published and soon there will be another—the last, perhaps of his volumes of the Great War—which will tell the whole story with nothing left out, even as it is being told to-day by those papers which are con-

"Father of all nations, endue us with vision, and courage, and resource in Thee, that the crisis of the world may become the opportunity of the Kingdom. Guide our country, empower our churches, inspire and restrain ourselves and all men that righteousness may triumph. For wisdom to discern the means most profitable to abiding peace and international concord, for leaders to point the way and for multitudes to follow them, till all nations are one fraternity, we pray to Thee. Make real the brotherhood of man, O God, and glorify our race in a fellowship of friendly peoples. O Love, crucified afresh by the sin of the world, after this Calvary, grant us, we beseech Thee, an Easter Day and a triumphant Christ. Amen.

This—on behalf of us all.—JUNIA.

Needle Points of Thought.

"Only that people can thrive that loves the land and swears to make it beautiful; for the land is the foundation element of human life, and if the public relation to that is false, all else is of need false and inverted."—Edward L. Carpenter.

"If a political and social millennium ever comes to this troubled old earth it will be because, league of nations or no league, the British Empire and the United States—the English-speaking peoples of the world—so will it. It will be because England and America pull together and not apart."—Chicago Evening Post.

Flu Treatment.

THE doctors, of course, have been observing a great deal about the Flu since its first appearance, and the treatment has changed somewhat materially. At first they said to give "plenty of nourishing, but digestible food." Afterwards the food supply was cut down to custard, broth, orange juice and milk. To-day I have received a letter from a nurse who has run into a flu epidemic in the United States. She says that a doctor there who has only had one death in spite of the fact that he has been called for miles to various towns, absolutely forbids milk, and permits no food but cold water until the fever dies down. He also sweats the patients until

the fever disappears not recommended breaks out in however, to about it, so is the feeding and most up-disease is so serious chances with it. nurse speaks, w once before, and on that experie Since writing of a successful d water for the fir juice for the r broths and cust

House

Dear Sir.—In Advocate I no sketches that at culture, etc. I with my house p and the leaves se they are quite r that looks like eye, is in the plant from the e pot and fresh roots with soap long before I not give me any inf I would be ver any powder I co them do better

Newton, Robi

Soil for house the plants will hand stable man cause worms, h bake the soil, l pots, long enou insects eggs, wo an authority in prefers bone-me plants, as it is les You might try into baked soil (which can be b but be careful t much of the fe give the plants a people find tha to plant them i garden for the su

A Sco

S. MacD., I kindly sends us a "delicious Scot iche". (I wonder right). Since th Scotland, he bids take notice."

Gallaniche Cake 1 cup; cream or 2; baking powd starch, 1 cup; flou Also Scotch Sh 1/2 lb. butter; 1 c moisture, and ba These "sound" a few thousands in Canada this w

Easter

Poached Eggs.—egg must be te consistency and yolk a delicate the white. To e water, plenty of the buttered ring carefully one by them into the ring at once from stro and as soon as t small skimmer u the ring in place t upon a round o a bit of butter a or pepper on top o Egg and Sardin egg for each pers and halve. Rob mustard, salt, ca to taste, also 2 sa the empty halve and serve on le spoonful of salad Finely minced an or chicken may sardines. Never water to cool as tough.

Hot Cross B.

the fever disappears. Now, I do not recommend you to try this if flu breaks out in your home. I do ask you, however, to talk with your own doctor about it, so that he can find out if this is the feeding most approved by the best and most up-to-date authorities. The disease is so serious that one can take no chances with it. The doctor of whom the nurse speaks, went through a flu epidemic once before, and is basing his treatment on that experience.—Junia.

Since writing the above I have heard of a successful doctor here who gives only water for the first two days, adds orange juice for the next two, and, after that, broths and custard.—J.

House Plant Query.

Dear Sir.—In looking over the Farmer's Advocate I notice almost every week sketches that are very helpful on Horticulture, etc. I am having quite a trouble with my house plants; they do not bloom and the leaves seem to turn up even when they are quite moist, and a small worm that looks like a tiny fish worm to the eye, is in the earth. I removed one plant from the earth and put it in a fresh pot and fresh earth and cleaned the roots with soap and water and it was not long before I noticed more. If you could give me any information on the subject, I would be very glad indeed. Is there any powder I could get that would make them do better?

Yours truly,
Mrs. W. E. ROWE.
Newton, Robinson, Ont.

Soil for house-plants must be rich, else the plants will not do well. On the other hand stable manure in a pot is likely to cause worms, hence florists as a rule, bake the soil, before putting it in the pots, long enough to kill any insects or insects eggs, worms, etc. Eben Rexford, an authority in floriculture, says he prefers bone-meal as fertilizer for house-plants, as it is less likely to harbor worms. You might try re-potting your plants into baked soil, enriched with bone meal (which can be bought from any seedsman), but be careful that you do not put too much of the fertilizer in as that will give the plants a sort of indigestion. Many people find that it helps house-plants to plant them in a suitable place in the garden for the summer.

A Scotch Cake.

S. MacD., Leeds Co., Ont., very kindly sends us the following recipe for a "delicious Scotch cake called 'Gallaniche'". (I wonder if we have the spelling right). Since the recipe came from Scotland, he bids "Sandy" "look up and take notice."

Gallaniche Cake.—Butter, 1/2 cup; sugar 1 cup; cream or rich milk, 1/2 cup; eggs 2; baking powder, 1 teaspoonful; corn starch, 1 cup; flour, 1 cup.

Also Scotch Shortcake.—One lb. flour; 1/2 lb. butter; 1 cup sugar. Mix, without moisture, and bake.

These "sound" so good that probably a few thousands of them will be baked in Canada this week.

Easter Cookery.

Poached Eggs.—To be perfect poached egg must be tender and jelly-like in consistency and opalescent in color, the yolk a delicate pink showing through the white. To ensure this pour boiling water, plenty of it, into a pan, and put the buttered rings in. Break the eggs carefully one by one into a cup and slip them into the rings, drawing the pan away at once from strong heat. Cover the pan, and as soon as the eggs are done slip a small skimmer under each ring, holding the ring in place until the egg is deposited upon a round of buttered toast. Put a bit of butter and sprinkling of paprika or pepper on top of each and serve at once.

Egg and Sardine Salad.—Boil hard an egg for each person. Cool, remove shells, and halve. Rub the yolks fine and add mustard, salt, cayenne and lemon juice to taste, also 2 sardines minced fine. Fill the empty halves of the eggs with this and serve on lettuce or cress with a spoonful of salad dressing on top of each. Finely minced and highly seasoned ham or chicken may be used instead of the sardines. Never drop hard eggs into water to cool as that will make them tough.

Hot Cross Buns.—One Cake yeast.

1 cup lukewarm milk, 1/2 cup sugar, 1/4 cup butter, 1 egg, 1/4 cup sultana raisins, 1/4 teaspoon salt, 3/4 cups flour. Dissolve the yeast and 1 tablespoon sugar in the lukewarm milk, and beat in 1 1/2 cups flour. Beat until smooth then add butter and sugar creamed, the beaten egg, floured raisins, salt and rest of flour, or enough to make a soft dough. Turn on the lightly floured board and knead lightly. Place in a greased basin. Cover and set aside in a warm place until doubled in bulk, which should be in about 2 hours. Now shape into medium-sized round buns and place in well-greased pans, 2 inches apart. Cover and let rise about an hour, or until light. Glaze with egg beaten with a little water. With a sharp knife cut a cross on top of each, and bake 20 minutes. Just before removing from the oven brush with sugar moistened with water and while still hot fill the cross with frosting.

Herrings au Gratin.—Butter a pie dish and sprinkle with minced parsley. Split the herrings, cut off the heads, and take out the backbone and as many of the other bones as possible without breaking the fish. Use a thin sharp knife for this. Roll them up with the skin inwards, season well, place a little butter on each, sprinkle thickly with brown bread-crumbs and bake in a quick oven for 10 minutes.

Fish Ramekins.—Soak a 3-lb. finnan haddie in equal parts of milk and water for 1 hour. Bake in a moderate oven 35 minutes, then separate into flakes. Cook 1/2 tablespoon finely chopped onion and 2 tablespoons finely chopped green pepper if you can get it, with 1/4 cup butter, for 5 minutes, stirring constantly. Add 1/2 teaspoon salt, 1/2 teaspoon paprika or a dash of pepper, a few grains of cayenne, and 4 tablespoons flour, and stir until well mixed; then pour on gradually, while stirring, 1/2 cup cream and 1 cup milk. Bring to boiling point and boil 2 minutes. Next add the prepared haddie. Fill buttered ramekin dishes (deep patty pans will do) with the mixture, cover with buttered crumbs and bake in a hot oven until brown.

Fish Souffle.—Melt 2 dessertspoons butter in a saucepan and stir in about a cupful of cold mashed potatoes. When hot add a cupful of cooked fish broken small, a dessertspoon of minced parsley, and 1/2 cup milk. Now stir in 2 beaten yolks of egg; season with salt and pepper and lightly fold in the stiffly beaten whites of the eggs. Bake in a buttered serving dish until a pale brown.

Creamed Fish.—Use either cooked or uncooked fish. Scald 1 cup milk with 1 tablespoon minced onion, salt and pepper to season, also, if you have them, a bay leaf and 2 sprigs of parsley. When the milk is flavored strain and use for making a sauce with 2 tablespoons butter and 2 of flour. Butter a serving dish and fill with layers of flaked fish (about 1 1/4 cups), and the sauce. Cover with 1/2 cup buttered crumbs and bake until lightly browned.

Fish Loaf.—One cup minced fish, 1 tablespoon lemon juice, 1 teaspoon minced parsley, 1/2 teaspoon salt (unless fish is salty) pepper to taste, 1/2 cup or more buttered crumbs, 1 or 2 eggs. Beat the egg well, add the other ingredients, pack into a buttered mould and steam or bake in a pan of water. When set turn out and pour a sauce around or peas, or sliced cucumber with French dressing. If the fish is uncooked it will be required to be steamed longer. If the white of egg is beaten stiff and folded in at the last, just before steaming, the dish will be more like a souffle, and quite delicate, and will make more portions.

Odds and Ends to Eat.

Cream Cookies.—Mix together 2 cups sugar, 2 cups cream, 1 teaspoon salt, 1 even teaspoon soda, 1 teaspoon vanilla. Beat 1 egg well into this, and add enough flour to form a moderately stiff batter. With a spoon drop this on some buttered baking-sheets, leaving a space between. Serve plain or with raspberry icing.

Scottish Potato Scones.—Mash potatoes while hot. Add a little salt and enough flour or barley flour to make stick together a little, kneading well. Roll out, cut into squares, prick with a fork and bake on a hot buttered griddle on top of the stove. The secret of light scones lies in baking them while the potato is hot. Serve very hot with butter.

Raisin Corn Bread.—One cup sour milk,



Condensed advertisements will be inserted under this heading at four cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 60 cents.

AFRICAN GEESSE, INDIAN RUNNER, Muscovy ducks, Guinea, Barred Rocks, Spanish R. I. Reds, White Leghorn, White Wyandotte, Anconas, Campines. Eggs only. John Annesser, Tilbury, Ontario.

ANCONAS SINGLE-COMB STRONG AND vigorous. Two year hens mated to cockerels from trap-nested stock. Eggs \$1.50 per 15, \$7.00 per hundred. W. E. Williams, Clandeboye, Ont.

BEAUTIFUL WHITE ROCKS BEAUTY and utility combined in one grand breeding strain. Only worth while hens trap-nested through their pullet year used as breeders. Eggs at \$2.50 for 15. J. A. Butler, M. D., Newcastle, Ont.

BABY CHICKS FOR SALE—BARRED ROCKS, White Wyandottes, Rhode Island Reds and S.-C. White Leghorns Barron strain. April delivery \$30.00 per hundred, May delivery Wyandottes \$28 and Rocks, Reds and Leghorns \$25 per hundred. 98% safe arrival guaranteed. Finest flocks in Canada. Fred J. Hind, Baby Chick Specialist, 1378 Queen St. E., Toronto, Ontario.

BARRED ROCK EGGS—FROM POSITIVE pedigreed trap-nested stock, wonderful producers, trapped by myself. For a change of blood you need my stock; \$3.00 per setting. B. Linscott, Brantford.

BRED-TO-SHOW LAYING STRAIN BARRED Rock eggs for hatching. Write for catalogue. Chas. Barnard, Leamington, Ont.

BRED-TO-LAY SINGLE-COMB WHITE Leghorn eggs for hatching, fifteen \$1.50, hundred \$7.00, carefully packed. Broken eggs replaced. Addison H. Baird, Route 1, New Hamburg, Ontario.

BARRED ROCK EGGS; FIFTEEN, TWO dollars; thirty, three fifty; ten dollars, one hundred; from hens that are bred and barred right and grand layers. Order from this advertisement. Satisfaction guaranteed. W. Bennett, Box 43, Kingsville, Ont.

BARRED ROCKS—PARKES' and O. A. College bred-to-lay strains. Can supply cockerels. Write your wants. Eggs, \$2 for 15. M. A. Gee, Selkirk, Ont.

BABY CHICKS AND HATCHING EGGS. Barred Rocks, White Rocks, White Wyandottes, Golden Wyandottes, Rhode Island Reds and White Leghorns. Pure-bred utility stock. Incubator capacity, 9,000. Satisfaction guaranteed or money refunded. Write for prices. Tay Poultry Farm, Perth, Ontario.

BARRED PLYMOUTH ROCKS—CHAMPION Guelph winners; heavy egg production; eggs, \$3.00 per 15. Jno. Fenn, Plattsville, Ont.

BABY CHICKS—BEST LAYING STRAINS. S.-C. White Leghorns, 18c. each. Barred Plymouth Rocks, 22c. each. Hatching eggs, \$1.25 per setting, \$6.50 per hundred. G. W. Grieve, Parkhill, Ont.

BARRED ROCK COCKERELS FOR SALE AT reduced prices. Satisfaction guaranteed. Write John Pringle, London, Ont.

BRED-TO-LAY TOM BARRON WHITE Leghorns and Barred Rocks; one-fifty per setting. Henry Hooper, 83 Nottingham St., Guelph, Ont.

CYPHERS WYCKOFF BRED-TO-LAY S.-C. White Leghorns, baby chicks and hatching eggs. Catalogue free, giving description and prices. Cooksville Poultry Farm, Cooksville, Ont.

CANADIAN RINGLET BARRED ROCKS—Trap-nested daily for 5 years. Send for records. F. J. Coldham, Box 12, Kingston, Ont.

EGGS FOR HATCHING—BRONZE TURKEYS Barred and White Rocks, Pekin, Rouen, and Indian Runner ducks, White Wyandottes, White Leghorns and Rose-comb Brown Leghorns. Write or prices. J. H. Rutherford, Albion, Ont.

EGGS—\$2.50 FOR 15—S.-C. BUFF LEGHORN, Ancona, Blue Andalusian, Dark Cornish. Hugh McKay, 33 Curry Ave., Windsor, Ont.

EGGS AND DAY-OLD CHICKS FROM extra heavy laying strains of Barred Rocks, White Rocks, Reds, Wyandottes, Orpingtons, Minorcas, White Leghorns, Brown Leghorns, Anconas, Spanish, Silver Hamburgs, Cornish, etc. Also duck eggs, Pekin, Alsbury, Rouen, Runners, Fawn, pencilled and Pure White. Write for our free mating list. M. Shantz, Ayr, Ont.

EGGS—SINGLE-COMB WHITE LEGHORNS, Barron's strain; lay year round. S.-C. Rhode Island Reds, selected winter layers, \$3.00 per fifteen. E. Willson, Aurora, Ont.

FERTILE HATCHING EGGS—TEN YEARS selective breeding—Rose-comb Rhode Island Reds; bred for size, vigor and production of bred-to-lay strains; fifteen, \$2.00; thirty, \$3.50; eight dollars per hundred. Robert J. Brown, R.R. 2, Cornwall, Ont.

FAIRVIEW S.-C. BROWN LEGHORNS, Becker strain. Eggs, \$1.00 per 15. Wm. Bunn, Denfield, Ont.

HATCHING EGGS—FROM TRAP-NESTED stock; Barred Rocks and White Leghorns, heavy laying strains; fertility guaranteed, per setting two dollars. R. J. Parkinson, Granton, Ont.

I HAVE THREE COCKERELS \$5.00. HENS S. S. Hamburgs \$3.00 each, 2 Light Brahma hens \$3.00 each, 3 cockerels \$5.00 each, 4 hens, 6 pullets, Red Caps \$3.00 each. Eggs in S.-C. White and Black Leghorns \$3.00 per 15. Robert Houser, Canboro, Ont.

LAY-A-Lot S.-C. WHITE LEGHORNS trap-nested the year through. Only tested hens used as breeders. A laying strain of Barron blood foundations. Eggs at \$2.50 for 15. J. A. Butler, M. D., Newcastle, Ontario.

MINORCA EGGS, BOTH COMB. ONE fifty per fifteen, also cockerels four dollars each. Fred Reekie, Camperdown, Ontario.

PURE-BRED SINGLE-COMB WHITE LEGHORNS, Rose-comb White Wyandottes, bred-to-lay and prizewinning stock. Eggs, \$2.00 per fifteen. Esra Stock, Woodstock, Ont.

PLYMOUTH ROCK LAYING STRAIN, FROM Agricultural College—\$1.50 per setting. Mrs. Berry, 52 Queen St., Guelph.

REGAL DORCAS WHITE WYANDOTTES, America's Finest Strain, winners at New York and Boston, splendid layers of dark brown eggs. Official records, 200 to 255 in North American laying contests. Vigorous, matured cockerels, \$4.00 and \$5.00 each. Eggs \$3.00 and \$5.00 per setting. FREE illustrated catalogue. John S. Martin, Port Dover, Ont.

SINGLE COMB WHITE LEGHORNS EGGS from Tom Barron strain, one fifty per setting. J. E. Honsberger, Dunnville, R.R. 4.

SILVER GREY DORKING EGGS FROM A careful selected laying strain. 1 imported cockerel head of pen, \$2 per 13. W. Shore, Hideron.

S.-C. WHITE LEGHORNS—HEALTHY, VIGOROUS stock; proven laying strain. Results will please. Fifteen eggs, \$1.50. James Row, R. I. Belmont.

S.-C. WHITE LEGHORNS—230-264-EGG strain, or O.A.C. Barred Rock eggs, \$1.50 setting; \$8 hundred. Selected egg-producers that cannot be beaten. A. B. C. Dickinson, Port Hope, Ont.

SINGLE-COMB WHITE LEGHORN BABY chicks from our celebrated laying strain, for sale. Utility Poultry Farm, G. O. Aldridge, Mgr., Lt. Col. T. G. Delamere, Prop., Stratford, Ont.

SPECIALISTS IN BARRED ROCKS SEVENTEEN years. Eggs for hatching, Guilda and Ringlet strains bred-to-lay, hens have free range; fifteen, two dollars, fifty for five. J. F. Werden and Son, R. 8, Picton, Ont.

S. C. RHODE ISLAND RED—EGGS FOR hatching from two choice standard-bred pens at \$5 per fifteen. Also eggs from two pens of select layers at \$2 per fifteen, \$10 per hundred. Guarantee nine chicks to a setting. H. W. Pringle Napanee, Ont.

TURKEYS AND GEESSE—WE HAVE THIS spring 40 healthy Bronze turkey hens, mated to husky young toms. Eggs in season, \$5.00 per 10. 39 choice Toulouse geese, also well mated; eggs now ready, \$4.50 per 9. Few toms and ganders on sale. Everything in pure-bred land and water fowls. Write us first. Stamps for early reply. Yamaska Poultry Farms, St. Hyacinthe, Que.

WHITE WYANDOTTES—A VERY CHOICE lot; health, quality and size. Eggs \$1.50 per 15. Herbert German, R.R. 1, Paris, Ont.

WHITE WYANDOTTE EGGS FOR HATCHING, heavy layers and prize winners. Two to five dollars per setting. Stock for sale. J. McCaffrey, Newmarket, Ont.

WHITE WYANDOTTES, BRED FOR TYPE, size, vigor, and production. Eggs for hatching \$2.00 per 15. Frank Morrison, Jordan, Ont.

BABY CHICKS of Quality

Single-comb White Leghorns, bred-to-lay. Order now and get the early layers. Price 25, \$6.00; 50, \$11.00; 100, \$20.00. Safe arrival guaranteed. Also 8 weeks old pullets \$1.00 each.

Walnut Glen Poultry Farm R. R. 4 - Chatham, Ont.

BABY CHICKS

Barred Rocks, White Wyandottes, White Leghorns Bred-to-lay from Parks, Poorman's and Barron's strains. These are known as America's best. Prices On Application. Special prices to Farmers' clubs and others in lots of 300 and over.

LUCKNOW HATCHERY LUCKNOW - ONTARIO

Large, heavy barred fowl, very productive layers, no separate pens, all have free range. Cockerels of last seasons' hatch weighed from eight to ten pounds. Eggs for hatching \$1 per 15. R. A. Cowan, Streetsville, Ont.

1 beaten egg, 1 tablespoon butter (melted) 1 teaspoon sugar, 1 1/4 teaspoon salt, 3/4 teaspoon soda, 1 teaspoon cream of tartar, 1 cup flour, 1 cup cornmeal, 1/2 cup raisins. Mix together the milk egg, butter, sugar and salt. Add the soda dissolved in a tablespoonful of water, then the flour and cream of tartar sifted together. Stir in the cornmeal and raisins, and bake in a moderate oven half an hour.

Carrots With Sauce.—Clean and cut carrots in half-inch cubes. Cover with boiling salted water and cook until tender. Drain, keeping the water for the sauce. Make a sauce using this water, to which has been added a little sugar and nutmeg, with butter and flour to thicken. There should be just half as much sauce as vegetable. Pour it over the carrots and cook together for 5 minutes. Serve very hot.

Corned Beef.—Corned beef is delicious when properly cooked, especially when served with greens, cabbage, kale, Brussels sprouts or turnips. The secret is long, slow cooking. If you let the water boil hard the beef will be dry and tasteless. The right way is to put the meat in a saucepan with enough cold water to cover it. Let come to a boil and boil briskly for half an hour, then draw to the back of the range and let just simmer, covered closely, for 3 1/2 hours or more. Leave in the water afterwards so that

The Windrow

The first dinner ever held by women law students in Toronto, was given on April 2nd.

Sir Oliver Lodge has announced that he will resign as Principal of the University in Birmingham in June, as he wishes to devote the rest of his life to the problem of the Ether of Space, in both its physical and psychical relations.

Sir William Crookes, famous English scientist, died in London on April 4. Among the achievements of his life were the discovery of thallium, a new element, and valuable experiments with electricity and radium. Of late years he gave considerable attention to psychic phenomena, which he endeavored to correlate with physical laws.

The cost of the war is now placed at \$197,000,000,000, with a death roll of 9,000,000.

Canada has had about four hundred pictures painted to commemorate Canadian action in the Great War, from the manufacture of munitions and airplanes to the fighting of the great battles. The work was done concurrently with the War by eminent British and Canadian artists, including Wyndham, Lewis, W. Roberts, John Turnbull and Paul Nash, and eventually the pictures will be brought to Canada, where they will form a permanent war memorial in the National Art Gallery at Ottawa.

Horticulturists of Chatham, Ont., have announced their intention to make their town one of the most beautiful on the Continent. Is not this praiseworthy ambition one that should be followed by every other city, town, village and rural community in Canada. There never has been and never can be jealous rivalry over the planting of trees, shrubs, vines and flowers. Indeed, the only effect of these beautiful gems of Nature is to sweeten and ennoble character. Can we afford to do without them?

Apropos of the foreign names seen masquerading in Ireland during recent Sinn Fein activities, *The Australasian* facetiously notes:

Kipling's entertaining story of Namgay Doola suggests that you find the Irish in unexpected places, but a glance at Irish papers during the recent election campaign shows that Ireland isn't by any means the best place to look for them. It seems to get less like Enniscorthy and more like an international directory every day.

Strange are the good old Irish names That come from College lawn, For De Valera somehow sounds Like "Sella de banawn." These foreign sounds and funny ways Make Erin's exiles stare, For Rocklinghausen's not a name That seems to fit a fair.

And though they come of Irish stock, To tell the blessed truth, They never heard of Marcovicz In Cashel or Maynooth. It's sad to see so many born Without the prefix O'; Stands Ireland where it used to once? Well, hang me, if I know!

At the lunch hour we heard this conversation between the office boy and his evidently unattached friend:

"Gee, how long you been workin' here?" "Ten days already." "Good job?" "Swell." "When do you hafter get to work?" "Any time I want to." "Aw, go-wan! Whatcha tryin' to do, kid me?" "Nope. I c'n go to work any time I feel like it, just so I'm no later than 7 o'clock."

"Why don't you get out and hustle? Hard work never killed anybody," remarked the philosophical gentleman to whom Rastus applied for a little charity. "You're mistaken dar, boss," replied Rastus: "Ise lost fough wives dat way."

Our Friend, the Brush.

HAS it ever occurred to you to wonder how the first brush was made? And has the wondering carried you back to some cave woman, cleaner than the others, who tied a bunch of reeds or grass together and brushed out the floor of her cave? In some such way, assuredly, must the first brush or broom have been made.

To-day we have brushes of every kind, and for every purpose. They are very great savers of work, and yet in many homes one might search from cellar to attic and find no more than three—a broom, a large scrubbing brush and a clothes' brush. And yet working brushes, are not expensive—at least were not before the war, and are not yet in comparison with other things.

Often the scarcity of "our friend, the brush," is due to one's not knowing just the kinds of brushes that may be bought.

Of course everyone knows the little stiff brushes that are to be bought at any of the Knox or Woolworth stores. Everyone, however, does not know the various uses to which they may be put. If she did she would keep at least three or four on hand all the time: one beside the kitchen basin, to be used for the hands, one for scrubbing vegetables, and others for washing glassware and granite utensils. Cleaning celery becomes an easy task if one has a brush to do it with. So does preparing potatoes for baking with the skins on, or getting carrots, beets, parsnips or salsify ready for the pot. And glass never glitters so well as when cleaned with warm soapy water and a brush, followed by a good rinsing in clear water.

If one has much to do with cleaning bottles and sealers a round bottle brush, with bristles all round for several inches will be found a very great help. A large brush of similar form is made for cleaning toilets, and will be found indispensable in any rural home that is supplied with a waterworks system. A bath tub brush, with a can of "Dutch Cleanser" or ammonia will make keeping the bathtub clean an easy matter. "Old Dutch" or a can of ashes and salt mixed should always be kept with the brush used for granite ware and other pots and pans. Such little helps save more time and labor than can be easily estimated.

Hardwood floors, or the stained or painted borders about rugs need, of course, a dustless mop, which is one of the greatest labor-savers for the house-keeper. If one has not one of the patented mops, made of heavy cords, one can make a very good substitute by fastening a wad of clean old cotton in an ordinary mop fixture, afterwards moistening the cloth with coal oil, or, still better, with the O-Cedar or other oils used for the patented mops. For polishing hardwood floors after waxing a large brush for the purpose may be bought. It is fitted with a heavy leather strap through which the foot may be slipped so that foot-power may be used, if wished, a brick padded all over and covered with flannel makes a very good polisher, but is harder to use.

For dusting upholstered furniture a stout whisk will be found very useful, but the furniture should be taken out of doors where the dust can blow away. Afterwards the woodwork should be dusted with a soft cloth treated with kerosene or O-Cedar.

Best of all brushes are the vacuum cleaners, which not only brush the dust out of rugs, upholstery and from walls and curtains (if equipped with the proper fixtures), but also draw the dust right up into a bag, so that it can be carried to the furnace or stove and burned instead of being left free to fly about. Vacuum cleaners also help to keep carpets and upholstery free from moths, as they draw the moths and "buffalo bug" up as well as the dust. The cleaners intended for use where there is no electricity require two to operate them, one to pump and the other to direct the nozzle. If electricity is available only one operator is required. A very good electric cleaner can be bought for about \$60 and will be found invaluable in any farm home provided with electricity as many are at the present time and more will be when things resume their natural progress again.

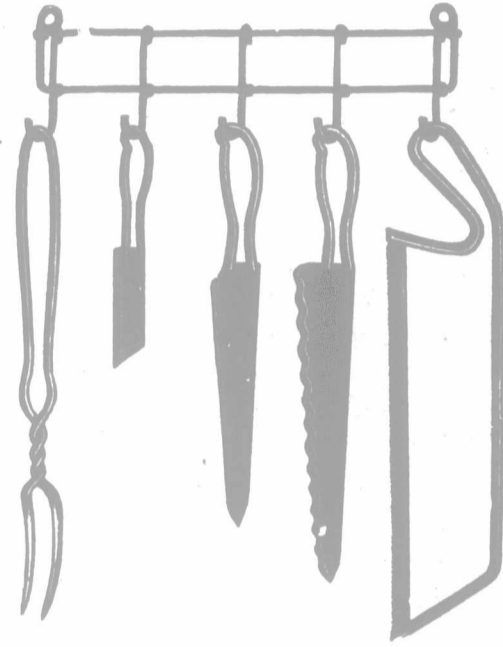
Special to Subscribers

We have a large stock of the SANITARY KITCHEN SETS shown in the illustration. These were formerly given as premiums to subscribers for sending in the names of TWO NEW SUBSCRIBERS, and were excellent value. Now, owing to the large stock, we will send one of these useful sets to any regular subscriber for sending in the name of

One New Subscriber to the Farmer's Advocate and Home Magazine

For one new Subscription:

Sanitary kitchen set consists of all—metal Roasting Fork, Paring Knife, wavy-edge Bread Knife and Meat Saw, with metal rack to hold them all. A useful article for any kitchen.



To secure one of these sets, just send in the name of one new subscriber to the Farmer's Advocate and the sum of \$1.50 he will give you.

Coupon

THE WILLIAM WELD CO., LTD. LONDON, ONTARIO

GENTLEMEN:—

Enclosed is money order for \$1.50 and the name of a new subscriber to the Farmer's Advocate and Home Magazine. Please send the Sanitary Kitchen Set you advertised.

Name of Sender.....Address.....

Name of new Subscriber.....Address.....

Keep the mud OUTSIDE your car!

Ordinary mats are not efficient in keeping the interior of your auto free from mud and dirt. Let us send you a pair of these all-metal, nonrusting.

DENNISTEEL Made in Canada AUTO MATS



\$3.00 per pair DELIVERED FREE

They come to you, complete, all ready to slip on, and are the finest thing in running-board improvements. Remit by express or postal order at our risk. Money refunded if not satisfied.

THE DENNIS WIRE AND IRON WORKS CO. LIMITED LONDON CANADA

Extracts From A "Dairy Show."

At the great U. S. National Dairy Show, held last fall at Columbus, Ohio many interesting speeches were delivered. As the following extracts and observations apply to Canada as well as to the United States, they are here given with pleasure.

Mrs. Ira Couch Wood, Chairman of the Child Welfare Committee of the National Council of Defense for Illinois, called attention to the fact that the country is spending great sums of money every year to take care of cows, pigs, horses, chickens and so on, and not nearly enough to take care of the children. "We are just beginning to apply the same science to the human child as we do to animals," she said. "One great eye-opener has been the experience of the draft. From one-third to a half of the young men examined were found unfit for the defence of the country when the test came. I do not believe we are working for the children now only to make soldiers of them; we should work as much to make them healthy and capable for peace."

In the United States a great campaign is being undertaken—to save 100,000 children who die from preventable causes every year. Everywhere Child Welfare organizations are setting to work, and children under 6 years of age are being weighed and measured—just as they have

been in the clinics held in some places in Canada. By these examinations, in which nearly 7,000,000 so far have been weighed and measured, a large number of children have been found not up to the standard.

Commenting on this Mrs. Wood says: "One of three things is the matter—either they are not getting enough food or they are not getting the right kind of food, or they have physical defects which could be remedied to make for proper growth. We have a very small percentage of people who cannot secure enough food. It is not a matter of poverty but of ignorance. Parents need education and re-education to bring home the fact that there are standards in child development, and that the proper food in the majority of cases will bring the child up to the standard.

"Our children should be 100 per cent. perfect," she continues. Of course, some will be handicapped by heredity, but proper feeding works wonders. "It means milk and butter and plenty of green vegetables, very little meat.

"In most families, the baby of two years takes his chance with father at the family table, for most tables represent what father likes. A child of two years fares very ill at the family table. You have to give it a special diet.

"We have not put quite the right emphasis on this whole matter. I believe we have to put the feeding problems

right into the school, high school and college, and make that one of the main purposes of education. We train woman very carefully if she is going to be a lawyer or doctor, but after all most women will be home-makers, and they should be carefully trained for that.

"We have to see that mothers are educated to feed the children the right sort of food. To this add fresh air, plenty of rest, wholesome recreation, and we will put the child where he belongs in the centre of things.

"There is not much use sending the boys across to win victory and peace if we do not have a strong, virile nation to inherit the kind of world they are making for us."

Report of Farm Condition.

Under date of March 31 the Ontario Department reports as follows regarding farm conditions: The young fall wheat is looking well although it has been exposed more than usual during the winter. The next two or three weeks, however, are regarded as the most trying times for the young plants and at the time of reporting, strong, raw winds were prevailing.

Considerable spring plowing has been done in some of the southwestern counties. In Lambton and Kent some spring wheat and oats have been sown already. Wellington and Lincoln predict a large acreage of spring wheat, but Halton states that mixed grains will be preferred in that county.

Clover does not look so promising as fall wheat, as it has suffered more from heaving. Where top-dressed in the fall red clover is said to be in excellent condition.

Little or no winter injury to orchards has been reported. Fruit buds are very far advanced for the season.

Live stock are more or less in demand, excepting horses. But while the horse market generally is dull, several carloads were shipped from the northern part of Huron during the month. At a recent fair in Wellington about fifty animals were sold to dealers for outside points, and about as many more to local farmers.

Beef cattle are being marketed more freely, but there is a scarcity of well-finished animals offering. Good grade cows are in great request. At a recent sale in Lambton grade Shorthorns averaged \$155; two brought \$181 and one \$191. Waterloo reports the average price paid for fourteen grade Holstein cows was \$165.75. In Dundas dairy cows have changed hands at from \$100 to \$140. Hogs are being turned off in fair numbers, and more are likely to be fed than were counted on recently. Young pigs are again in brisk demand, six weeks old animals being snatched up at from \$11 to \$13 each.

Hay is scarce, and is selling at from \$20 to \$25 a ton. Other fodders, more especially roughage, are more than sufficient for all calls.

Beans are in good supply, and buyers are more active.

Farmers' Clubs are active in buying and selling. Wellington reports that ten clubs in that county are shipping live stock co-operatively, and are buying seed grain for its members. Waterloo also states that its clubs are doing similar work.

Maple sap has not been running so freely as in the average season.

Markets

Continued from page 761.

Offerings for the week totaled 5,725 head, as against 5,725 for the previous week, and as compared with 4,200 head for the corresponding week a year ago. Quotations:

Shipping Steers, Natives.—Choice to prime weighty, \$17.50 to \$18.50; fair to good, \$16.50 to \$17; plain and medium, \$13 to \$15; coarse and common, \$10.50 to \$11.

Shipping Steers, Canadians.—Best heavy, \$15 to \$16; fair to good, \$13.50 to \$14.75; medium weight, \$12 to \$15; common and plain, \$10.75 to \$11.

Butchering Steers.—Yearlings, choice to prime, \$15.50 to \$16.50; choice heavy, \$16 to \$16.50; best handy, \$14.50 to \$15; fair to good, \$12.50 to \$14; light and common, \$10 to \$11.

Cows and Heifers.—Best heavy heifers, \$13 to \$13.75; good butchering heifers,

\$12 to \$13.35; fair butchering heifers, \$10.50 to \$11; light common, \$8 to \$9; very fancy fat cows, \$11.50 to \$12; best heavy fat cows, \$10.50 to \$11; good butchering cows, \$9 to \$10; medium to fair, \$7.75 to \$8.50; cutters, \$6 to \$6.50; canners, \$5.25 to \$5.50.

Bulls.—Best heavy, \$11 to \$12; good butchering, \$10 to \$10.25; sausage, \$8 to \$9; light bulls, \$7.50 to \$8.00.

Stockers and Feeders.—Best feeders, \$11.50 to \$12.50; common to fair, \$10 to \$11; best stockers, \$11 to \$12; fair to good, \$9.25 to \$9.75 common, \$8.75 to \$9.

Milchers and Springers.—Good to best, small lots, \$100 to \$135; in carloads, \$90 to \$100; medium to fair, small lots, \$80 to \$85; in carloads, \$70 to \$75; common, \$50 to \$55.

Hogs.—Prices held to a high level last week, notwithstanding that receipts were quite liberal. Monday a few heavy hogs reached \$21, but the bulk had to take \$20.75; Tuesday's trade was steady; Wednesday the bulk brought \$21; Thursday the range on the best grades was from \$20.90 to \$21, and Friday the general market for good hogs was \$20.75. Pigs showed little change all week, selling from \$19.50 to \$20, good roughs landed around \$18, and stags ranged from \$15 down. Receipts for the past week totaled 22,700 head, being against 23,746 head for the week before, and 22,400 head for the same week a year ago.

Sheep and Lambs.—Some heavy declines were noted in prices last week. Monday top wool lambs sold up to \$20.75, and before the week was out, or on Friday, buyers landed the best at \$19.60 to \$19.65. Shorn lambs also ruled lower as the week advanced. Monday the best in the shorn line moved at \$17.75, and by Friday tops were down to \$16.75 and \$17. Cull lambs, both in the wool and shorn line, sold from \$2.50 to \$3 per cwt., under the tops. Sheep were strong the first part of the past week, but after Tuesday values on these were lower. Monday's sales included wool wethers up to \$17, with clips up to \$14.50, and the last half of the week showed wool wethers selling at \$16.50, with clips going from \$14 down. Best shorn ewes landed around \$12 and \$12.50, few the fore part of the week up to \$13. The past week's receipts

were 18,600 head, as compared with 16,061 head for the week before, and 11,400 head for the same week a year ago.

Calves.—Last week started with top veals selling at \$20.50, and culls ranged from \$17 down. Some heavy declines, however, were noted after Monday. Friday was the low day, when tops landed at \$18, and culls ranged from \$13 down. Receipts the past week aggregated 7,600 head, being against 5,309 head for the week preceding, and 5,800 head for the same week a year ago.

Cheese Markets.

New York, specials, 32c. to 33½c.; average run, 31½c. to 33c.; Montreal, finest easterns, 24c. to 25c.

Sale Dates.

May 14, 1919.—Jos. Dorrance & Son, R. 5, Seaford.—Dual-purpose Shorthorns.
June 12, 1919.—National Ayrshire Consignment Sale, Springfield, Mass.
June 13, 1919.—New England Ayrshire Club consignment sale, Springfield, Mass.

Sam, the choreman, returned from the city with a scarfpin that contained a "diamond" of no usual size. It was the pride of his heart and the envy of his village companions. He treated all inquiries from them as to its value and its authenticity with high scorn.

His employer, after a week of basking in its radiance, asked Sam about its history.

"Sam," he said, "is it a real diamond?"
"Wall," said Sam, "if it ain't I've been skun out of a half-dollar."

A poor man, who had hardly been able to clothe his wife and family properly, one day hit upon an invention—something to do with airplanes—which he sold for a good round sum.

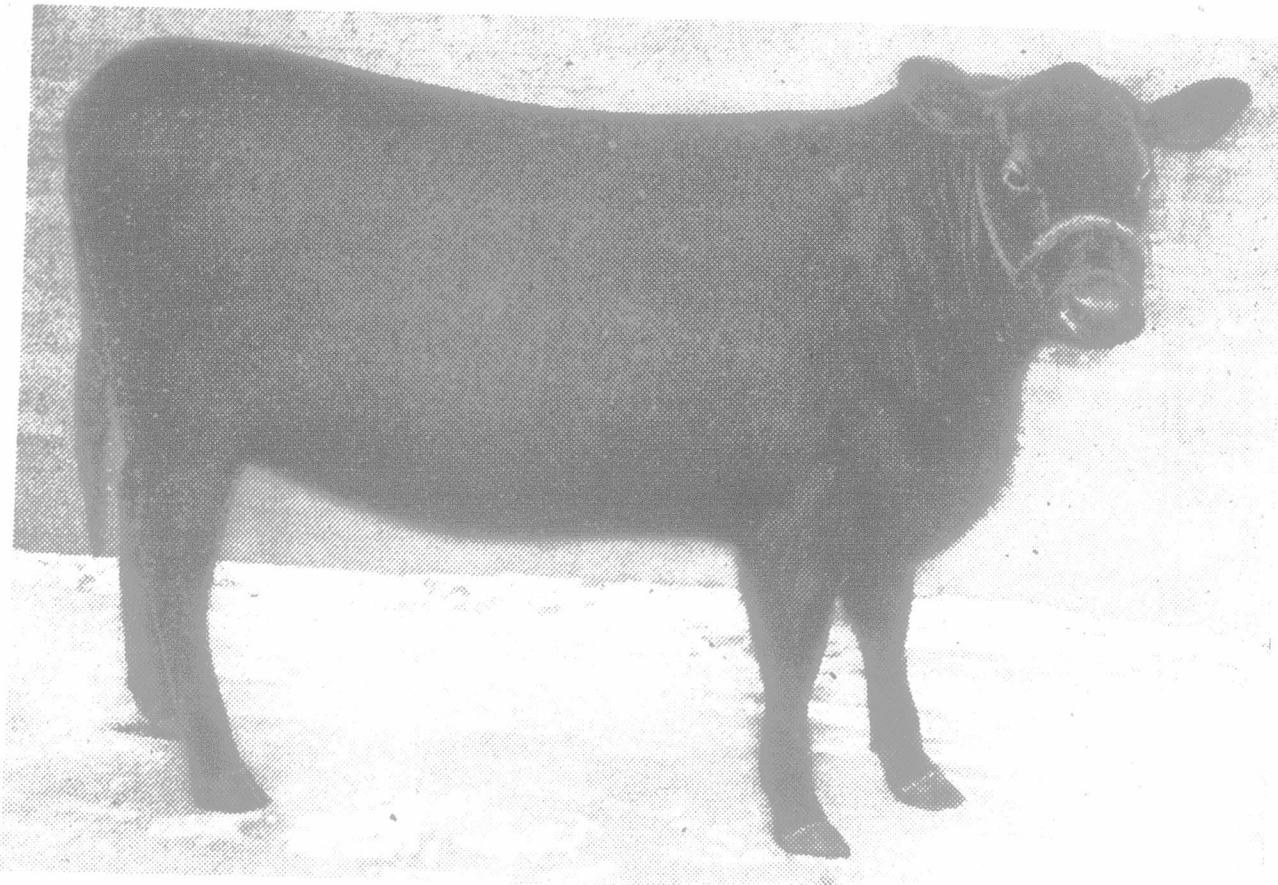
The poor man went to his wife with tears in his eyes.

"At last, my dear," he cried, "you will be able to buy yourself some decent clothes."

"I'll do nothing of the kind," she retorted. "I'll get the same sort the rest of the women are wearing!"

"Royal Purple" Calf Meal

Any Farmer can increase his income by selecting one or two calves each season to make baby beef



Mr. Farmer, if not yourself, give your boy a chance to make something for himself on the side.

MABEL.—This excellent Cross-bred Angus-Shorthorn heifer (shown in photograph) was born November 5th, 1917. At thirteen months and thirteen days old weighed 990 pounds, and sold to Anderson Bros., of London, for baby beef, for which they paid 25c. a pound, live weight. This calf was fed "ROYAL PURPLE" Calf Meal. It was fed and bred by Mr. Andrew Hicks, of Centralia, Ontario.

Mr. Hicks also raised BILLY SUNDAY, which he sold at Toronto Fat Stock Show, on December 8th, 1918, at auction, for 25c. a pound, to the Harris Abattoir. Billy was fifteen months five days old and weighed 1,330 lbs. Said to be the heaviest calf at his age ever seen at the Toronto Fat Stock Show. He was also fed ROYAL PURPLE throughout the year.

Mr. Hicks fed 2,100 lbs. of ROYAL PURPLE CALF MEAL to all his calves last year.

There is something wrong with the farmer's reasoning of figuring if he uses new milk to raise calves. Calves can be raised on our Royal Purple Calf Meal after three days old, just as well as on new milk, at 30% of the price of new milk. This we have proven beyond a shadow of a doubt. We admit there are meals sold on our Canadian market called "Calf Meal" that would make better pig feed, because they do not take the place of new milk, but our Royal Purple product contains all the elements found in new milk.

If you will write us we will send you one of our new books, which tells you why our meal will produce calves like are shown in this advertisement, and compares it with other meals taken from Government Bulletin No. 388.

Royal Purple Calf Meal is sold everywhere by dealers. If your particular dealer does not handle it, write us, and we will tell you where you can get it.

Made by THE W. A. JENKINS MANUFACTURING COMPANY, LIMITED, LONDON, ONT.

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week started with top 20.50, and culls ranged Some heavy declines, noted after Monday. day, when tops landed ranged from \$13 down. week aggregated 7,600 head 5,309 head for the and 5,800 head for the ago.

Markets.

Specials, 32c. to 33 1/4c.; to 33c.; Montreal, to 25c.

Dates.

Jos. Dorrance & Son, National Ayrshire Congfield, Mass. New England Ayrshire Sale, Springfield, Mass.

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Meal

the baby beef

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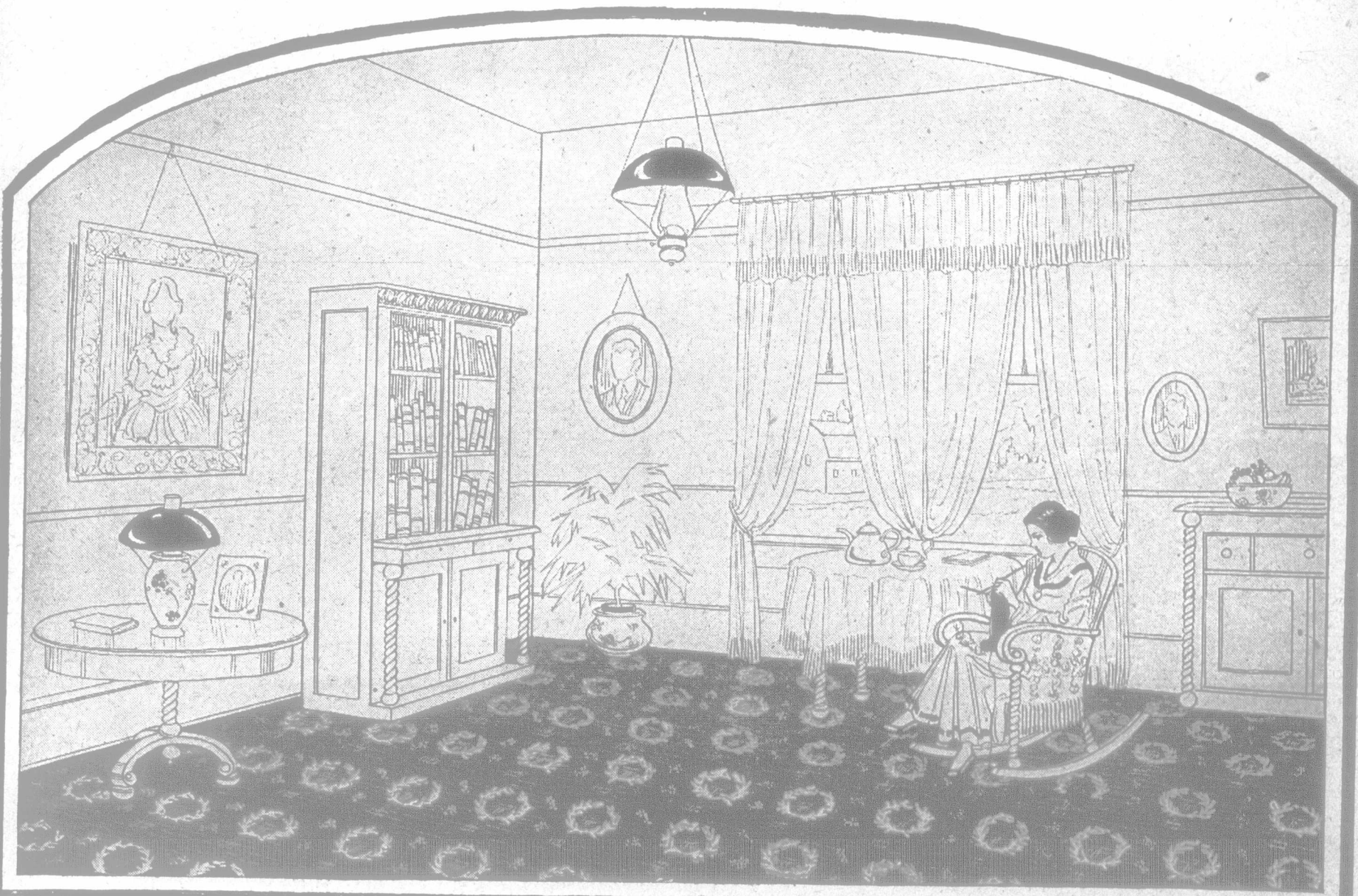
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ROYAL PURPLE last year.

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ON, ONT.



The Appearance of any Room Depends upon the Floor Covering

Many people are now replacing their carpets with Feltol—the moderate priced sanitary floor covering.

Soft wood floors, in spite of every effort to keep them presentable, never look right. Instead of constantly repainting them, use

Feltol
The moderate priced
FLOOR COVERING

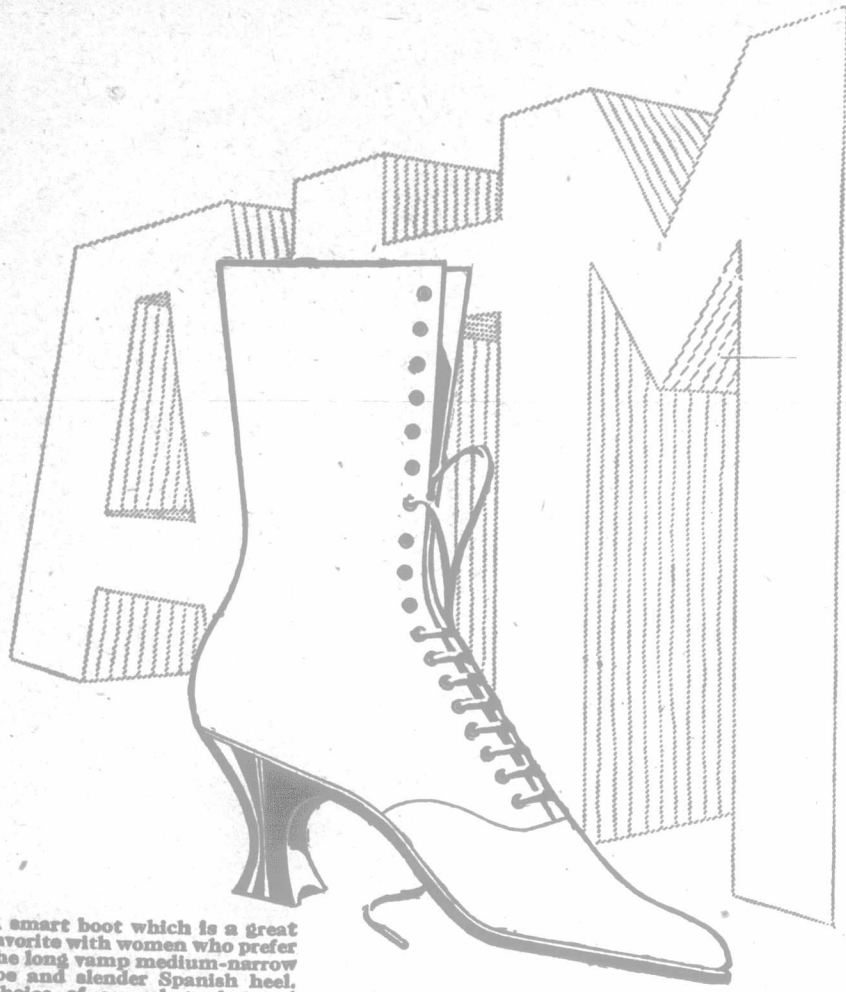
Although it resembles linoleum and floor oilcloth in appearance, Feltol is quite different in character—and much less expensive. Made on a felt base—instead of canvas, which is invariably used for oilcloths and linoleum—Feltol is resilient, soft and quiet—agreeable to the tread.

It comes in many delightful patterns.

Remember, Feltol is not linoleum nor floor oilcloth—it is the best felt base floor covering made—superior to the best imported, yet much lower in price.

At all the better stores where floor coverings are sold.

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THERE are many things which you need not buy unless you choose. But footwear is not one of them. You must have shoes. And the problem of buying shoes is one which comes home to every man and every woman in Canada.

In order to help you solve this problem, we have prepared a booklet with the title given above. We believe that you will find it helpful and interesting, whether you buy A.H.M. Shoes or not. And it is not necessary to buy A.H.M. Shoes in order to profit by the information which is contained in it.

We are glad to send a copy with our compliments to any address in Canada. Please send your request to our Head Office, at Montreal.

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When you buy Shoes look for—

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More and Better Live Stock

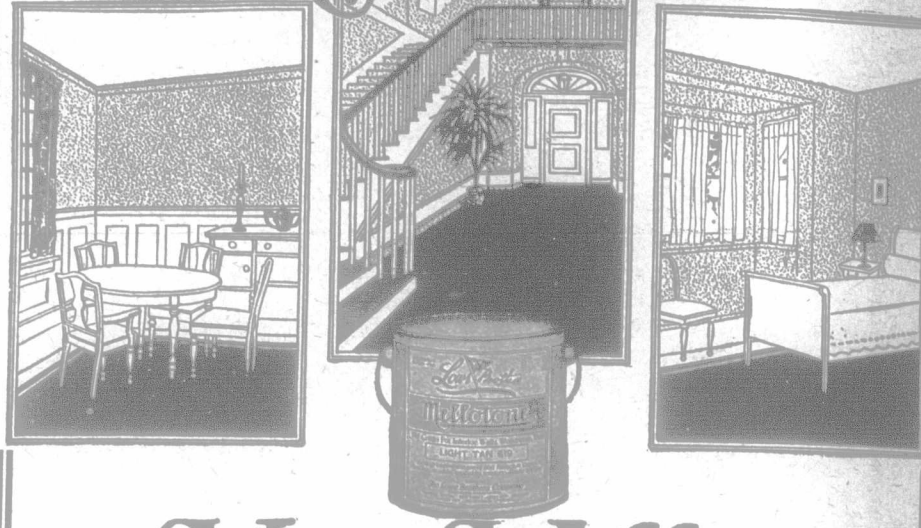
EDITOR "THE FARMER'S ADVOCATE":
It is the well-established breeder whose standard of stock is high, and whose financial resources are such as will permit the breeding of the desired type that will reap the benefits of the overseas demand. There are, however, a comparatively small number of breeders in our Dominion to-day who find themselves so situated. The matter thus evolves itself into one in which the less fortunate breeder must take a greater interest. There is a large percentage of breeders, however, whose success is largely barred by the inadequate supply of capital at their disposal. Possessed of the essential knowledge of breeding, feeding and management, yet lacking financial backing. A percentage of our stockmen find themselves handicapped. We must, therefore, adopt a system or breeding which will encourage more to attempt to build up the live-stock industry, with good breeding and vigorous

animals that will appeal to the breeders of Britain and the European countries. The breeders of this country will agree that we should increase breeding capacity to the fullest possible extent. To do this we must adopt progressive principles. Let us here consider co-operation under three headings, namely, to improve the stock by using a pure-bred sire of proven merit (considering individuality). Second, the keeping of good pure-bred females as far as possible, and lastly, to put the live-stock business on a more substantial basis (through co-operation). There are numerous facts worthy of consideration under the headings just mentioned. Local co-operative associations formed throughout our province can do much to establish a live-stock industry, such as must be the case if we expect to take full advantage of the opportunities before us. There are principles in live-stock breeding which are given more attention through co-operative associations than through the individual breeder. For

instance, particular strains in pure-bred cattle have, through "Record of Performance," proven themselves of great value. Sons of such dams are the most profitable to purchase as herd sires. The average small breeder may not feel financially fit to purchase sons of high-testing dams, because undoubtedly the price of such well-bred animals is high. This is an important factor which an organized club through co-operation can overcome. This is undoubtedly true and it is probably natural to expect that, as a result of the war and its attendant sacrifices and discomforts, co-operative enterprises should multiply; nevertheless, it is an accepted fact that although the war has brought about heavy increases in the cost of doing things, it has also brought a condition of affairs wherein farmers, as well as other sections of the population, have experienced a much larger cash turn over than ever before. While this advantage is far from as marked as some would have us believe, it nevertheless

exists, and sends, therefore, to lessen the expectation for marked co-operative developments, but anyone who has followed co-operation in Canada must admit at once that progress in co-operation has been accelerated during the war, and that the spirit of mutual help has gained much greater prestige than it held before. An association enables the breeders to co-operate in buying. A group of farmers can buy a sire in partnership and use him collectively. This is a great economy over the plan of several farmers buying their individual sires and using them on only ten or fifteen females. Moreover, if a large number of stock is to be purchased for the community, a saving can be realized by having a representative committee purchase the stock. This not only applies to buying but to selling as well. We have association or club sales, to which members have the privilege of consigning individuals they may have for sale. This co-operative work may not only apply to live stock but to all pro-

Mellotone



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Use it instead of wallpaper, as it is more artistic, more sanitary, less expensive.

Use it instead of Kalsomine, as it is more durable and can be easily washed.

Use it instead of ordinary paint, because, instead of being glossy and solid in color, it is dainty in tint, with the soft, velvety effect so much sought nowadays.

Use it because of its wonderful range of delicate colors, exact reproductions of nature's harmony tones.

Use it because it is very easy to use. Comes in cans of different size, goes on like paint, and looks like fine paper.

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and let them prove that Quality is more important than Price. Let them make your vegetable garden a success, and show you that it pays to put in



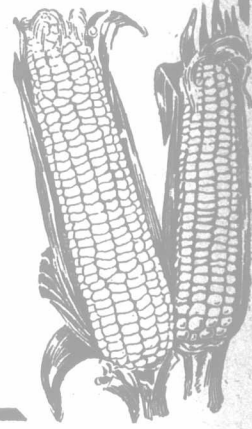
Everybody likes sweet, juicy corn in summer. And these two varieties are guaranteed to give you many a

delightful dinner dish. Plant them.

SUGAR CORN	pkt.	1/2 lb.	1 lb.	5 lb.
McDonald's Select				Postpaid
Golden Bantam	10c.	35c.	60c.	\$2.75
Early Mayflower	10c.	30c.	50c.	\$2.25

Order everything you need for a garden in these tested seeds. Our new Catalogue will help you make selections. Write for it.

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ducts in such as fruit and feed in large quantities which the great saving Canada way of att export of we cannot which larg unprofitabl industry an engaged. of quality, one that top prices quality sto purposes, females tha do this and spread area the great enlist the would but would like stock of sup standing, must get operative Work along substantial place the liv on a more s

Carleton

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The wee Perennial Bladder Ca Mustard, C weed or W Oats and C Each sprin numerous fa viting all wh some weeds with us in th ment outlin which is giv tion forms fo the leaflets, and return the carrying selected are supplied wit report the r

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1. That by rape sow of eradicating and Twitch 2. That r crop to use in Grass than B 3. That t in the fall an cared for hoe Campion.

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1. The use of Perennial S 2. A syste and cultivation by turnips, ra cating Perenn 3. The use of Twitch Gra 4. A meth destruction of 5. Method eradication of Bell.

ducts in connection with agriculture, such as the handling of butter and eggs, fruit and potatoes, etc., also the buying of feed in large quantities for the farmer, of which the average farmer considers a great saving.

Canada may easily place herself in the way of attaining a powerful place in the export of live-stock business. But this we cannot achieve by careless breeding, which largely accounts for inferior and unprofitable stock, no matter in what industry an individual or country may be engaged. The producer of an article of quality, finish and uniformity is the one that readily finds a market at top prices to produce the uniform, high-quality stock to provide for breeding purposes, we must use the sires and females that will deliver the goods. To do this and to do it throughout a wide-spread area, as would be consistent with the great overseas demand, we must enlist the services of the fellow "who would but can't." The farmer who would like to but cannot produce more stock of superior quality, due to financial standing, must help each other. They must get together; some form of co-operative breeding must be adopted. Work along these lines will not only bring substantial personal rewards but will place the live-stock production of Canada on a more sound and substantial basis.

M. A. POWELL.

Carleton Co., Ont.

Co-Operative Experiments in Weed Eradication.

BY J. CLAZIE.

EDITOR "THE FARMER'S ADVOCATE":

This experimental work was commenced in 1912 and has been conducted now for seven successive years. The object of this work is to have carried on by men on their own farms experiments in the eradication of weeds, the results of which will furnish data from which definite information may be obtained regarding the best methods of controlling the various troublesome weeds of the Province. Before the results of these experiments began to accumulate there was very little or no definite knowledge concerning the eradication of weeds.

The weeds experimented with are Perennial Sow Thistle, Twitch Grass, Bladder Campion or Cow Bell, Wild Mustard, Ox-eye Daisy, Field Bindweed or Wild Morning Glory, Wild Oats and Chess.

Each spring leaflets are sent out to numerous farmers of the Province inviting all who have any of these troublesome weeds on their farms to co-operate with us in this work and try the experiment outlined for the particular weed which is giving them trouble. Application forms for the experiments accompany the leaflets. To those who fill in these and return them detailed directions for the carrying out of the experiment selected are sent and in the fall they are supplied with blank forms on which to report the results of their work.

In the past seven years (1912-18) over sixty farmers have co-operated in this work and some valuable information has been obtained. It may be briefly summarized as follows:—

1. That good cultivation followed by rape sown in drills provides a means of eradicating both Perennial Sow Thistle and Twitch Grass.
2. That rape is a more satisfactory crop to use in the destruction of Twitch Grass than Buckwheat.
3. That thorough, deep cultivation in the fall and spring, followed by a well cared for hoed crop, will destroy Bladder Campion.
4. That Mustard may be prevented from seeding in oats, wheat and barley by spraying with a 20 per cent. solution of iron sulphate without serious injury to the standing crop or to fresh seedings of clover.

The following are the experiments outlined for this year.

1. The use of rape in the destruction of Perennial Sow Thistle.
2. A system of intensive cropping and cultivation, using winter rye followed by turnips, rape or buckwheat for eradicating Perennial Sow Thistle.
3. The use of rape in the destruction of Twitch Grass.
4. A method of cultivation for the destruction of Twitch Grass.
5. Method of cultivation for the eradication of Bladder Campion or Cow Bell.

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The demand for the "Phonola" has grown so large that two completely-equipped factories are now required.

In our Kitchener plant, skilled mechanics, who have specialized in phonograph work for many years, make the new "Phonola" Sound Box, the new Universal Seamless Tapered Tone Arm, the quiet, smooth-running Motor, and other accessories.

In the Elmira plant experienced cabinet makers build the beautiful "Phonola" cabinets.

By making the "Phonolas" complete in our own factories in Canada we can guarantee the quality and workmanship and give exceptional values.

Cabinet Models from \$25.00 to \$340.00.
"Phonola" Double Disc Records—90c.

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The Phonola Co. of Canada, Limited
Kitchener, Canada

Model Duke \$118

Model B \$61

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Raise Every Livable Chick

Start them right. Pratts Baby Chick Food is a scientific food for Baby Chicks. Used from the start, it will save every well-born chick. Contains all the necessary elements for building strong, healthy chicks. Nothing but

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is needed for the first three weeks, except grit, drinking water, and just enough grain in the litter to make 'em exercise.

Not a scratch feed, but a perfectly blended, largely pre-digested food.

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6. Spraying with iron sulphate to destroy Mustard in cereal crops.

7. A method of cultivation for the destruction of Ox-eye Daisy.

8. A method of cultivation and cropping for the suppression of Field Bindweed or Wild Morning Glory (requires two years to complete.)

9. A method of cultivation and cropping for the eradication of Wild Oats (requires two years to complete.)

10. A method of cultivation for the destruction of Chess.

All who have any of these weeds on their farm are invited to join with us in this work. By so doing they should be able to clean the field of the weed experimented with and demonstrate to their own satisfaction the effectiveness of the method tried and at the same time their results will be of great value to others. Full information can be obtained concerning these experiments by writing to the Director of Co-operative Weed Experiments, Ontario Agricultural College, Guelph.—J. E. Howitt, O. A. C., Guelph.

On the western plains the sheepman goes out with several thousand head and one human companion. The natural result is that the pair, forced on one another when they least want it, from the habit of hating each other.

An ex-sheepman while in a narrative mood one evening was telling a party of friends of a fellow he once rode with. "Not a word had passed between us for more than a week, and that night when we rolled up in our blankets he suddenly asked:

"Hear that cow beller?"
"Sounds to me like a bull," I replied. No answer, but the following morning I noticed him packing up.
"Going to leave?" I questioned.
"Yes," he replied.
"What for?"
"Too much argument."

When writing advertisers will you kindly mention The Farmer's Advocate.

Nitrate of Soda Increases Crops



A luxuriant growth, the result of using Nitrate of Soda. Compare this with No. 1 where no Nitrate of Soda was applied.—Idaho Experimental Station.

No Soil Is Inexhaustible. If sold off the farm, every bale of straw, every bushel of grain, every bag of potatoes, every barrel of apples, every crate of berries, every basket of onions, every hog or sheep or cow or horse, every chicken or duck or turkey, every dozen of eggs, every quart of milk deprives your soil of some of its fertility.

This must be replaced by Fertilizers in some form to restore fertility



There was no Nitrate of Soda used on this crop. The stalks are weak and the yield is much less.—Idaho Experimental Station.

Nitrate of Soda is a refined product extracted from the surface crust of the rainless deserts of Chili in South America. Hundreds of thousands of tons of it have been used annually in British and European agriculture for a long period and this fact explains in a large measure the remarkably high yields attained on their century-old soils.

In Canada and the United States its use increases at a rapid rate. Farmers, fruit growers and gardeners are adopting the practice of the Old Country more and more yearly.

Nitrate of Soda furnishes Nitrogen—that most expensive element of Fertilizers—in its most available form. It far surpasses tankage, blood meal, feed cake refuse and such nitrogen-bearing fertilizers in this respect, and also in its economy. It is recognized as the Nitrogen plant food *par excellence*.

Try a Spring Tonic for Your Crops: You have seen small patches of luxuriant growth in pastures due to the manure or urine of the cattle—This is the work of Nitrogen.

You have seen the house plants of some flower-loving Homemaker grow and thrive from the judicious use of manure-water—This is the work of Nitrogen also.

Some Advantages and Uses of Nitrate of Soda

It stimulates the rapid growth and early maturity of most garden crops.

It makes plants resistant. Plants made strong by vigorous early growth can better resist drought, attacks of insects and plant diseases.

It increases yields of special crops. It is of great importance in the production of sugar beets, fibre plants, fodder crops and tobacco.

It improves pastures and meadows. Applied as a top-dressing it increases the growth of the grasses and clovers greatly.

Sometimes crops are checked in their spring growth owing to the delayed action of the soil bacteria. The Nitrate keeps the plants growing until the soil is stirred into full life.

It provides the highest-priced ingredient of complete fertilizers. Phosphoric Acid and Potash which are required by plants as well as Nitrogen, are not so costly as the Nitrogen nor are they so often lacking in our soils as is Nitrogen.

It forms basis of fertilizer mixtures. It is estimated that ready-made fertilizers cost from 25 to 35 per cent more than home-made mixtures. The scientific agriculturist will buy his supplies of Nitrate of Soda, Acid-Phosphate and Potash separately and make such mixtures as he knows his soils and crops require.

Nitrate of Soda supplies Nitrogen to plants even more readily than does manure. Backward pastures are stimulated into vigorous growth. Struggling fall wheat or spring crops are forced to grow; they do not have to wait for the bacteria to unlock the stores of plant foods held in the soil. Trees in the orchards attain a richer leafage. Vegetables in the garden shoot ahead. Lawns are made greener and richer.

Use Nitrate of Soda as a Spring Plant Food

The element of plant food first exhausted in soils is Nitrogen and in many cases a marked increase in crops is obtained by top-dressings of Nitrate alone. However, the skilful farmer will use it with Phosphoric Acid and Potash as the condition of the soil and the necessity of the crop indicates.

A comprehensive report on "Nitrate of Soda, its nature and use in agriculture," has been prepared by the Dominion Department and appeared in last week's edition of this publication. It has been prepared by Frank T. Shutt, M.A.D.Sc., Dominion Chemist, and B. Leslie Emslie, F.C.S., Supervisor of Investigational Work with Fertilizers. Write to-day for a copy of this report. It shows the value of purchasing fertilizers in pure form.

Price and Instructions for Ordering. The Nitrate of Soda is stored in Ontario at Brighton, Cobourg, Trenton, Nobel and Sulphide. The Price is \$82.00 per net ton in carload lots, f.o.b. cars at shipping point. The Board reserves the option of selecting the shipping point.

In less than car lots the price will be \$9.00 per bag weighing approximately 200 lbs. each, f.o.b. shipping point. Minimum shipment five bags.

All orders must be sent to Imperial Munitions Board, 56 Church St., Toronto, and each order must be accompanied by a marked cheque or money order for full amount of the purchase. Cheques and money orders should be made out in favor of Imperial Munitions Board, and must be payable at par in Toronto. In ordering please give full shipping directions including your Post Office address, name of railway and of your nearest railway station. All shipments will be made promptly. Freight charges will be collected on delivery.

Imperial Munitions Board, 56 Church St., Toronto, Ont.

Extraordinary for Shire in England Babingley demand, a him offered realized 1 there fetched and 400 g 450 guinea 500 and 45

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Live Stock Notes From England.

Extraordinary prices are being made for Shire horses at repository sales held in England. The stock of the stallion Babingley Nulli Secundus is in remarkable demand, and a three-year-old stallion by him offered at Peterborough Repository realized 1,300 guineas. Others offered there fetched 1,000, 825, 725, 640, 500 and 400 guineas. Fillies made 825 and 450 guineas; and brood mares 650, 560, 500 and 450 guineas in profusion.

I am told by the War Office that since the Armistice was signed up to March 21, 62,520 surplus army horses have been sold for £2,075,858, or a general average of £33 4s. Heavy draft horses for agricultural and street work have averaged £55, but some have made £100, and one, an American-bred Percheron gelding, has touched the 250-guinea mark. As a contrast, Shire geldings generally range from 170 to 200 guineas; those for heavy street work always fetching the second century of guineas. Shire horse breeding is flourishing apace in England and Wales, and the membership of the Shire Horse Society now stands at 5,700. Some 5,600 prefixes have been registered during the past two years, which would go to prove that the proprietors of those prefixes which they tack on to the names of their horses are intending to breed on a somewhat large scale. It took five and a half tons of paper to print the last volume of the Shire Horse Society's Stud Book! It contained 7,500 entries, or some 2,000 more than the previous volume did. The class of farmer which is joining the Society in greatest force is the tenant farmer, i. e., the man who rents his holding from one of the large landed proprietors. The Shire breed, generally, is in a flourishing condition.

You have few Large Black pigs over in Canada, but they are a splendid breed, and the type is just now growing very popular in England. At a sale on March 19, held by T. F. Hooley, at Dry Drayton, Cambridge, 146 pigs realized 4,495½ guineas, or a general average of £32 7s. 3d. Top price was 175 guineas given for the brood sow Drayton War Lady, farrowed 1916, and one of a pen of first prize winners at the Manchester Royal Show in 1916. Other sows made 80 and 90 guineas, but Alderman Ball, of Nottingham, and father of Ball V. C., the young airman who was killed after performing many valorous feats in the war, gave 125 guineas for the gilt Drayton Ladylike.

At a sale of Hereford bulls, in the city of that name, Lord Cawley paid 900 guineas for the first-prize winner H. Weston & Sons Bound's Imperialist by Conquest, out of Gossip, a SENTRY cow and a well-fleshed bull full of substance. Other good prices were 510 and 400 guineas paid for young bulls, for which there was an active demand among home breeders. ALBION.

A village clergyman, walking round his parish, met an old parishioner. "Well, John," he said, "how is it I have not seen you at church for several Sundays?"

"Hain't got no Sunday trousers," answered John.

"Well," said the clergyman, "I think we can remedy that. I have a pair at home which will just about fit you, and I will have them sent to you to-day."

"Thank'ee, sir," said John. The trousers were duly sent, and the following three Sundays John was seen at church. Then, after being absent for some time, the clergyman again met him.

"Well, John," he said, "you have no excuse for not coming to church lately. How is it I have not seen you there?"

"Look here, parson!" said John. "I like a man to speak plain. I know what you mean; you're thinking about them trousers. I come to church three Sundays, an', if you don't think I earned them trousers, just tell me how many more Sundays I shall ha' to come afore they're mine altogether!"

Johnnie Jones was doing penance in the corner. Presently he thought aloud pensively. "I can't help it if I am not perfect," he sighed. "I've only heard of one perfect boy in my whole life."

"Who was that?" his father asked, thinking to point out a moral.

"You," came the reply, plaintively, "when you were little." —"Waif."

SARNIA FENCE

Lower Prices on Fencing

TO make sure that you get your fencing when you want it this Spring, we advise, yes, urge you to place your order now or at the earliest possible date. We can make prompt shipments now. We are reasonably certain that the demand this Spring will far exceed our capacity, in fact, the capacity of any factory in Canada. Don't be one of those belated farmers who places his order at the eleventh hour when the rush season is on, because no human agency can overcome possible transportation delays, shipping congestion and other interruptions that follow the breaking up of Spring when the fence building season is on. It is to your advantage to have your fencing in hand for use the first available "fence day" that comes along. Better be safe than sorry. Place your order now. Our prices quoted mean Government standard gauge wire, prompt shipments, best quality, lowest prices, only two profits—yours and ours—a direct shipment from the factory on our prepaid freight plan, fencing fresh from the loom, new and bright, no better fencing made anywhere. Ask the man who uses Sarnia Fence. He knows.

Buy Now and Save Time and Money on Your Spring Requirements Take Advantage of Our Low Prices and Prompt Delivery

NOTICE—These prices include freight prepaid to your nearest station in Old Ontario in lots of 200 lbs. or over. We do not pay freight on Electric or Steamboat Lines. Write us for special prices on carlots, as a considerable saving in price can be effected as compared with L.C.L. shipments. Fence put up in 20, 30, and 40 rod rolls.

HEAVY WEIGHT STYLES Made throughout of Full Government Gauge No. 9 Hard Steel Wire.	Price per rod delivered in Old Ontario	8, 9. Weight per hundred rods, 1,200 lbs.	69c	high, 24 stays per rod, top and bottom wire No. 9, filling No. 13 hard steel wire, spacing 1 3/8, 1 3/8, 1 3/8, 1 3/8, 1 3/8, 2, 2 1/4, 2 1/2, 3, 3 1/2, 4, 4 1/2, 4 1/2, 5, 5, 5. Weight per hundred rods, 1,225 lbs.	Price per rod delivered in Old Ontario
4-33-0—Ranch Fence. 4 line wires, 33 in. high, 9 stays per rod, spacing 10, 11, 12. Weight per hundred rods, 550 lbs.	31c	10-50—Horse, Cattle, Sheep and Hog Fence. 10 line wires, 50 in. high, 12 stays per rod, spacing 3 3/4, 3 1/2, 4 1/4, 5 1/2, 6, 8, 8, 8. Weight per hundred rods, 1,325 lbs.	76c	20-60-P—Stock and Poultry Fence. 20 line wires, 60 in. high, 24 stays per rod, top and bottom wires, No. 9 filling No. 13 hard steel wire, spacing 1 3/8, 1 3/8, 1 3/8, 1 3/8, 1 3/8, 2, 2 1/4, 2 1/2, 3, 3 1/2, 4, 4 1/2, 4 1/2, 5, 5, 5. Weight per hundred rods, 1,325 lbs.	80c
5-40-0—Horse and Cattle Fence. 5 line wires, 40 in. high, 9 stays per rod, spacing 10, 10, 10, 10. Weight per hundred rods, 650 lbs.	37c	MEDIUM WEIGHT STYLES The following styles are made of No. 9 top and bottom wires, and No. 12 intermediate and stay wires of full Government gauge, and galvanized to stand an acid test:			
6-40-0—Horse and Cattle Fence. 6 line wires, 40 in. high, 9 stays per rod, spacing 7, 7, 8, 9, 9. Weight per hundred rods, 750 lbs.	43c	6-40-16—Cheap Pasture Fence. 6 line wires 40 in. high, 16 stays per rod, spacing 7, 7, 8, 9, 9. Weight per hundred rods, 570 lbs.	35c	Farm Walk Gate 3' x 48".....	3.50
7-40-0—Horse and Cattle Fence. 7 line wires, 40 in. high, 9 stays per rod, spacing 5, 6, 6, 7, 7 1/2, 8 1/2. Weight per 100 rods, 850 lbs.	49c	7-26-16—Hog Fence. 7 line wires, 26 in. high, 16 stays per rod, spacing 3 3/4, 3 1/2, 4 1/4, 5 1/2, 6. Weight per hundred rods, 580 lbs.	36c	Farm Walk Gate 3 1/2' x 48".....	3.60
7-48-0—Horse and Cattle Fence. 7 line wires, 48 in. high, 9 stays per rod, spacing 5, 6, 7, 9, 10, 11. Weight per hundred rods, 900 lbs.	51c	7-42-16—Sheep and General Purpose Pasture Fence. 7 line wires, 42 in. high, 16 stays per rod, spacing 6, 7, 7, 8, 8. Weight per hundred rods, 640 lbs.	40c	Farm Drive Gate 12' x 48".....	7.50
8-40—Sheep and Hog Fence. 8 line wires, 40 in. high, 12 stays per rod, spacing 3, 3 1/4, 4 1/4, 5 1/2, 7, 8, 8. Weight per 100 rods, 1,050 lbs.	60c	9-42-16—A General Purpose Fence at a Low Price. 9 line wires, 42 in. high, 16 stays per rod, spacing 3, 3 1/4, 3 1/2, 4 1/4, 5 1/2, 6, 8, 8. Weight per hundred rods, 750 lbs.	47c	Farm Drive Gate 13' x 48".....	7.75
8-48—General Stock Fence. 8 line wires, 48 in. high, 12 stays per rod, spacing 4, 5, 6, 7, 8, 9, 9. Weight per hundred rods, 1,100 lbs.	63c	14-48-16—Special Garden Fence. 14 line wires, 48 in. high, 16 stays per rod, spacing 3, 3, 3, 3, 3, 3, 3 1/2, 4, 4 1/2, 4 1/2, 5, 5 1/2. Weight per hun- dred rods, 1,060 lbs.	66c	Farm Drive Gate 14' x 48".....	8.00
9-48-0—General Stock Fence. 9 line wires, 48 in. high, 9 stays per rod, spacing 3, 4, 5, 6, 6, 8, 8, 9. Weight per hundred rods, 1,100 lbs.	63c	POULTRY FENCES 18-50-P—Stock and Poultry Fence. 18 line wires, 50 in.		Farm Drive Gate 18' x 48".....	8.75
9-48-OS—Special Horse and and Cattle Fence. 9 line wires, 48 in. high, 9 stays per rod, spacing 6, 6, 6, 6, 6, 6, 6. Weight per hundred rods, 1,100 lbs.	63c			Barb Wire, 2 pt, weight 78 lbs. per 80 rd. spool.....	4.85
9-48—General Stock Fence. 9 line wires, 48 in. high, 12 stays per rod, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per hundred rods, 1,100 lbs.	63c			Barb Wire, 4 pt, weight 86 lbs. per 80-rod spool.....	5.00

More than eight million rods of "Sarnia Fence" are in use on "Canadian Farms." The purchase of this Eight Million rods of Fencing has saved the farmers of this country more than \$500,000.00. "The Sarnia Fence Company's" "Direct from Factory to Farm" policy is directly responsible for effecting this handsome saving.

Do you wish to share in the benefits that so many others have derived from this "Direct Buying Policy?" We solicit your business entirely on the basis of co-operation.

If You Use Wire Fence Read This: The wire used in the manufacture of Sarnia Fence is made in the United States by the largest makers of wire in the world. Their product is recognized as the standard of the world. The Canadian Government stipulates the size of wire which will be allowed to enter Canada free of duty. No. 9 shall be over .140 and not exceeding .148 of an inch in diameter, consequently it is impossible for manufacturers buying their wire in the U. S. A. to use under-sized light wire, but must import full Government Gauge Wire.

If you are placing an order be sure you are getting a full gauge fence such as SARNIA FENCE and not a light weight.

Prepaid freight prices are quoted in Old Ontario, New Ontario, Quebec, Maritime Provinces four cents per rod extra. Our office at Winnipeg takes care of all Western Canada business. Get our descriptive literature and let us tell you exactly what kind of fence you want will cost laid down at your home town. This is your fence factory. We are the farmer's friend. Thousands of Canadian farmers are regular patrons of ours. Your turn next. Various kinds of field, farm and pasture fence, lighter weights for garden and orchard purposes, special poultry fence, lawn fence and gates in variety and styles to suit the requirements of our farmer friends in Canada. Made in Canada for Canadian farmers, sold direct on our "save-you-money" plan. Heed our advice. Order now. Have your fencing on hand when you need it, and at our exceedingly low prices quoted above. Write to-day.

OUR POLICY—To sell the Farmers of Canada the BEST FENCE it is possible to make at the LOWEST possible Price. Send your orders to our Factory. Address us

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It's time to think about planting your garden. Make your selections now.

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| CARROT—Chantenay Half-Long
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| SWEET CORN—Golden Bantam
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¼ lb. \$1.00, Oz. 35c., Pkt. 10c. | TURNIP—Orange Jelly or Golden Ball
¼ lb. 75c., Oz. 25c., Pkt. 10c. |
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Purple Top
Lb. \$1.40, ¼ lb. 75c., ¼ lb. 40c. |
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| ASTER—Select Comet, Mixed Colors
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¼ lb. 75c., Oz. 25c., Pkt. 10c. |
| BALSAM—Finest Double Mixed
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Pkt. 10c. | PETUNIA—Hybrids Mixed
Pkt. 10c. |
| SWEET WILLIAM—Finest Mixed
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Oz. 50c., Pkt. 10c. |
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Pkt. 10c. | TEN WEEKS STOCKS—Choice Mixed
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Pkt. 10c. |

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Ques

1st—Que to "The Fa department
2nd—Que plainly writ and must b address of t
3rd—In especially m wise satisfac
4th—Who veterinary enclosed.

Horse b lost flesh rise witho and then feeding hi flesh, and colic.

Ans.—T Have his t of powder ginger and heaped t Feed on g couple of daily. G digestion of grain a or work.

Seven-y spells in I

Ans.—I definitely The symp coffin join disease, in lameness i ment cons blistering a blister m of mercur 2 oz. vase inches hig that she c blister wel and in 24 t turn in a until the and bliste once mont or until th have her will be w may be in

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Ans.—A by a veter it would fessional interfere i in attenda to diagno who has r history of f the patien Sprains ar to treat. after the many case have patie with his ve not recover of stifle lam

Dispute O

1. Is i to be let the fences a adjoining. registered running in into A's pa cow. Is C
2. A ar 5 rods mo fence, wit was to kee he did not stop the ca to get B to

Ans.—I. not be alle do not beli running in

Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
2nd—Questions should be clearly stated and plainly written on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Unthrifty Horse.

Horse became sick in December. He lost flesh and strength, and could not rise without assistance for about a month, and then his appetite returned. I am feeding him well but he does not gain in flesh, and if I feed him any more he takes colic.

Ans.—This is due to faulty digestion. Have his teeth dressed. Mix equal parts of powdered sulphate of iron, gentian, ginger and nux vomica, and give him a heaped tablespoonful 3 times daily. Feed on good hay and rolled oats with a couple of carrots or a mangle or turnip daily. Give him regular exercise and as digestion improves increase the quantity of grain and also the amount of exercise or work.

Periodic Lameness.

Seven-year-old mare is subject to lame spells in her right fore leg.

Ans.—It is not possible to diagnose definitely without further particulars. The symptoms, to some degree, indicate coffin joint lameness, called navicular disease, in the early stages of which the lameness is usually irregular. The treatment consists in giving a long rest and blistering the coronet every month with a blister made of 2 drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline. Clip the hair off for 2 inches high all around the hoof. Tie so that she cannot bite the part. Rub the blister well in. In 24 hours rub well again and in 24 hours longer apply sweet oil and turn in a loose box stall, oil every day until the scale comes off. Then tie up and blister again, and after this blister once monthly so long as you can give rest or until the lameness ceases. If you can have her examined by a veterinarian it will be well to do so, as our diagnosis may be incorrect.

Lame Horse.

About the middle of January one of my horses became lame in the stifle while running out. I called my veterinarian in and he said the muscles of the stifle were stretched. He gave me a blister for it. He called again about 10 days ago and gave me another blister. His leg is swelled up now and he is still lame.

Ans.—As the patient is being treated by a veterinarian in personal attendance, it would be presumptuous and unprofessional for another veterinarian to interfere in any way. The practitioner in attendance is in a much better position to diagnose and treat properly than one who has not seen the case. From the history of the case there is no doubt that the patient is being properly treated. Sprains are often very hard and tedious to treat. Swelling is a normal result after the application of a blister. In many cases of this kind the owner must have patience, and should not find fault with his veterinarian because a case does not recover in a short time. Many cases of stifle lameness are incurable.

Miscellaneous.

Dispute Over Fence—Bull at Large.

1. Is it against the law for a bull to be let loose in pasture, providing the fences are good? A and C have farms adjoining. A has good fences and keeps registered cattle. C has a grade bull running in his pasture. This bull broke into A's pasture and served a registered cow. Is C liable for damages?
2. A and B are neighbors. A built 5 rods more than his share of the line fence, with the understanding that B was to keep up a water gap. However, he did not make it sufficiently tight to stop the cattle. What steps can A take to get B to build a proper water gap?

Ans.—1. According to law a bull cannot be allowed to run at large, but we do not believe that this applies to a bull running in an enclosed pasture lot. C is

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liable to the extent of the difference in value of the progeny.
2. If B refuses to repair the fence A might call in the township fence viewers to decide the type of fence to erect over the stream.

Feeding Hens a Mash.

I am feeding my hens a mash of ground barley and boiled potatoes daily. Some of our local poultry raisers tell me that this mash has an injurious effect on the hatchability of the eggs, and should be discontinued for several weeks before eggs are wanted for setting. Is this correct?

A. C. B.

Ans.—It is generally considered that feeding heavily on wet mash reduces the hatchability of the eggs. Experiments at the College have borne out this fact. Feeding a dry mash is not so injurious.

Lord George Wellesley said at a luncheon:

"One result of this war will be that the English workingman will be better paid. He'll be content no longer with his wages of the past.

"The English workingman is showing in numberless ways his resolve to have a better share of the good things his labor creates. I know a lady who, when a submarine crisis was at its worst, lectured in the east end of London on 'Cheap and Tasty Dishes for the Masses.'

"My next dish," the lady said in the course of her lecture, 'is boiled cod's heads. A boiled cod's head, dear friends, if properly prepared, a-dish fit for the gods. You take four cod's heads of good size and quality, place them in a casserole with salt and pepper, an onion and—'

"Wait a bit, ma'am!" "A gaunt chap had risen from a front seat. He was pointing his long forefinger at the lady and scowling.

"Wait a bit ma'am!" he repeated. "What I want to know is, who gets the cod?"

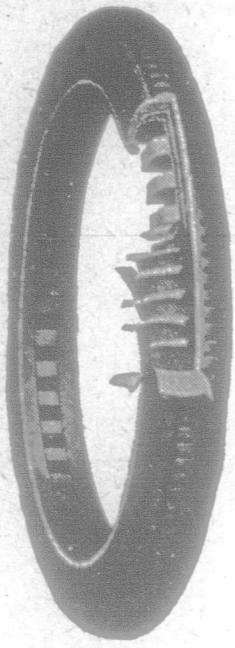
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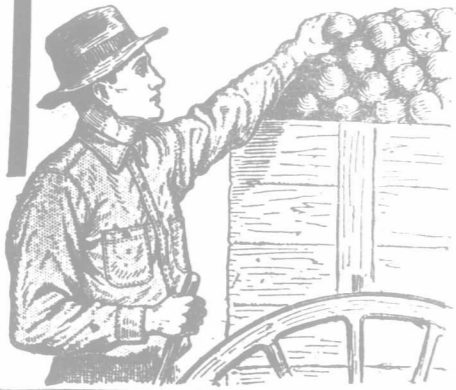
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Questions and Answers.
Veterinary.

Unthrifty Calf.

Calf ten months old has a poor appetite, and will not drink cold water. The chill must be taken off. It also grinds its teeth, and the eyes discharge water. It occasionally has diarrhoea.

SUB.

Ans.—The calf has chronic indigestion. Give it a laxative of 8 oz. raw linseed oil. Then mix equal parts of powdered gentian, ginger, nux vomica and bicarbonate of soda and give a teaspoonful 3 times daily. Feed on food of first-class quality. Take the chill off the water and add to it 1/4 of its bulk of lime-water.

V.

Inappetence.

About 5 weeks ago my 7-year-old ram appeared to go off his feed, and has steadily continued to appear to not have any desire for food. He has lost flesh until he is simply a skelton. He sometimes takes a mouthful of hay or grain and munches it with his front teeth and lets it drop out of his mouth. I have examined his teeth and find them all right.

T. L. K.

Ans.—It is possible that there may be some derangement of the teeth or other organs of the mouth that you do not recognize. It might be well, if convenient, to have him examined by a veterinarian. There may be partial paralysis of the muscles of cheeks and throat. But as you say, he "has not any desire for food," we must decide that the fault is not inability to masticate or swallow. He may be affected with some chronic disease of the digestive organ, possibly tuberculosis, for which nothing can be done. All that we can suggest is the administration of tonics. Mix equal parts of powdered sulphate of copper, gentian, ginger, nux vomica and bicarbonate of soda, and give him a heaped teaspoonful in 1/2 pint new milk 3 times daily. Until he commences to eat some it will be necessary to endeavor to sustain him by drenching him with boiled flaxseed or oatmeal gruel. Great care is necessary in drenching, as if the fluid is poured into the mouth in too large quantities, or if he refuses to swallow readily and considerable fluid be introduced and cause serious trouble, usually either suffocation, or mechanical bronchitis, which usually causes death, hence when drenching be careful to see that he swallows freely.

V.

Skin Trouble.

1. Some of my cattle are bad with mange. It commences on the head and around the eyes, spreads to the neck and appears in spots the size of a dime all over the body. These spots enlarge and the hair fall out.

- 2. Will this disappear when they are on pasture?
- 3. Is the milk fit for use?
- 4. Is there any danger of me contracting the disease?
- 5. Are horses liable to contract it?

J. H.

Ans.—1. The symptoms indicate ringworm. It is very contagious, hence the diseased should be isolated and great care be taken to not carry the infection to other cattle on hands, clothing, stable utensils, etc. Get a quantity of ointment made of the proportions of 2 drams of white hebleore to an ounce of vaseline, and dress with this twice daily. Instead of this you may use tincture of iodine, but where there is so much surface to cover the ointment is the most convenient.

2. It is not probable that a thorough recovery will result without careful treatment.

3. If the teats and udder are not involved and the milker is very careful, the milk will be fit for use. The quality of the milk is not affected by the trouble, but there is danger of contamination during or after milking.

4 and 5. Both man and animals are liable to contract it. It is due to a vegetable parasite, and by carefully washing hands, etc., after attending to the patients a person can avoid infection, but horses coming in contact with the infection are very liable to contract the trouble.

V.

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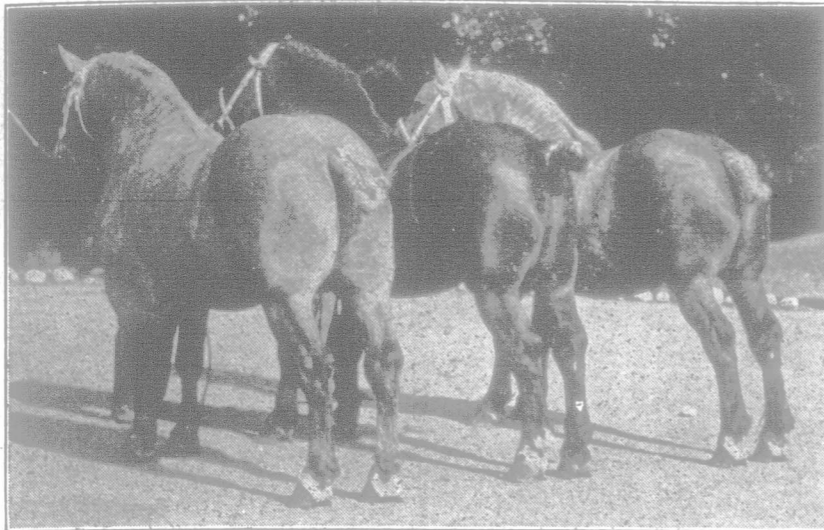
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Care and Repair of Farm Machinery.

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Throughout the Experimental Farms system, attention is given, so far as circumstances permit, to this factor in farm management. All implements are cleaned and placed under cover when not in use, all polished surfaces receiving an application of an anti-rust preparation. Axle grease or other lubricant will answer this purpose. As shelter, many types of structure are suitable and an expenditure not exceeding \$400.00 will usually provide a suitable building. Besides it is not always necessary to go to this expense since any weather-proof building already available will answer the purpose.

It is advisable to go over each machine after the day's operations, making proper adjustments, tightening loose bolts, making sure that the lubricating devices are working properly, that the bearings are not too tight or too loose and that cutting parts are sharp. An assortment of bolts, rivets, springs, etc. for each machine is provided and allotted a definite location in the tool room. This saves many trips and probably valuable time and the plan, systematically carried out results in the prevention of many breakages. Besides it has been proven that an implement in repair at all times has a longer life and gives more satisfactory service than one that receives erratic attention.

To carry out this work systematically a properly fitted work shop is necessary. It provides a comfortable place to work in during bad weather and in which those who so desire may develop their mechanical skill. It should be equipped with the necessary tools, including anvil, forge, work bench, vise, tongs, hammers, hardies, punches, drills, square, chisels, saws, wrenches, etc.—Experimental Farms Note.

His Day of Work.—"Tommy Atkins" pleaded exemption from church parade on the ground that he was an agnostic. The sergeant-major assumed an expression of innocent interest.

"Don't you believe in the Ten Commandments?" he mildly asked the bold freethinker.

"Not one, sir," was the reply.

"What! Not the rule about keeping the Sabbath?"

"No, sir."

"Ah, well, you're the very man I've been looking for to scrub out the canteen."

Swat the Scrub Dairy Bull



Mr. Dairyman:

Do you realize that a good bull is more than half the herd, but a scrub is mighty near all of it? Then swat him.

Be wise, and put an Ayrshire Bull at the head of your herd this Spring. Get one from a proven family.

No class of cow is in greater demand to-day than a Grade Ayrshire. Why?

Because in the manufacture of milk they possess the three great essentials required in a high class machine:—

Economy, Efficiency and Durability

It means dollars and cents to you.

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Canadian Ayrshire Breeders' Association

W. F. Stephen, Sec-Treas. HUNTINGDON, QUE.

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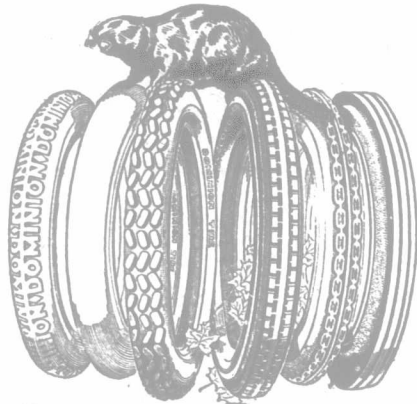
A DOMINION TIRE

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"NOBBY TREAD" TIRES are practically puncture-proof. But the big nobs do not account for all of this popularity.

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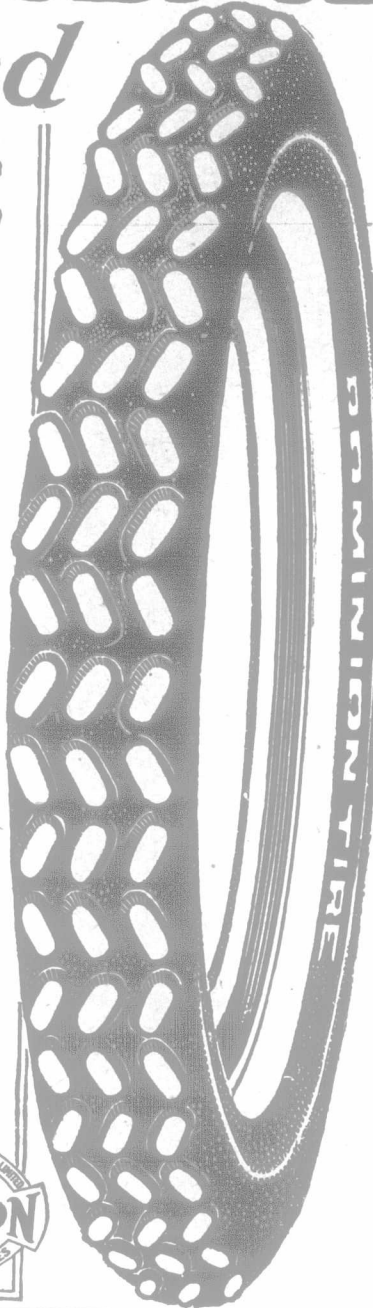
When you consider their greater mileage, their wonderful durability and their freedom from ordinary tire troubles, their greater ease and comfort in driving, 'NOBBY TREADS' are the most economical tires you can put on your car.



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DOMINION TIRES and ACCESSORIES are distributed through DOMINION RUBBER SYSTEM BRANCHES and sold by the Best Dealers throughout Canada.

DOMINION INNER TUBES
for all Dominion Tires
They cost no more than ordinary tubes.



The School and the Community.

In seeking a building through which a community organization can function, people are more and more turning their eyes toward the school houses which have for generations been monuments of neglected opportunity.

It is true that many of our schools have not been built with the idea of using them as a meeting place for the citizens of the community. With a little remodelling, however, they should be used to house the community forum, and what better place could be secured in which to work out the ideal of the new democracy. The school is the most democratic of all community organizations. Here meet the children of the rich and the poor; side by side in the school sit the children of all ecclesiastical denominations—divided on Sunday it is true, but reunited on Monday—here mingle the children of the farmer and the merchant, the laborer's boy and the doctor's son.

What a levelling institution it is for the youth of the land! Why not utilize it as the democratic meeting place for the citizens generally? We have gone so far as to use the school house as the polling place on election day, why not use it as the place where citizens gather to discuss the issues upon which they later will vote? It does seem foolish to meet at a common centre to vote on public issues, and at the same time to arrive at conclusions as to how to vote at sectional gatherings or from a prejudiced press.

The record of the United States, especially of Wisconsin, may be of particular interest to trustees of Canadian schools. Figures show that for 1915 in that State* over 500 schools were used as community centres; 242 had provided seating accommodation for adults, 479 had established community libraries, 204 had a young people's organization; and in 152 places the school principal was secretary of the community club.

Let trustees of schools already built plan to remodel these schools to meet the new demands; let the citizens in communities where new schools are being built have in view the use of the school as a meeting place for adult citizens; especially let all communities who are discussing consolidation, plan to provide a place which shall be a real community centre. Already this is being done, notably at Foxwarren, Manitoba, where a magnificent building has been erected at a cost of some \$50,000. The community club at this place uses regularly the splendid school auditorium for all public gatherings, while the whole school plant is available for community purposes.

"There once was a tool-house, a great mental tool-house,
'Twas shut every night in the year;
'Till we people who gathered around it discovered
That this was a folly too dear.
Said they: "If 'tis ours, then we have the powers
To use it whenever we will."
So 'twas opened at night and with music delight
And welcome, the whole place we fill.

However, before the school can fill its proper place in the life of the community generally, a further step is necessary. There must be, it is true, a wider use of the school plant; but with that must come a wider use of the school person. I mean that the school staff must get the community vision and apply themselves more closely to community tasks. Not the advancement of the individual but the betterment of society is the ideal of the new democracy. This ideal must be actualized in the life of the local community first, if it is ever to be actualized in the nation as a whole, and before it can be fully actualized in the local community, it must be grasped by the teen-age boys and girls in our public schools. Just whether they will grasp that ideal will depend in a great measure on whether our school teachers are demonstrating it in their teaching and in their lives.

But they must do more than teach the ideal of the new democracy—they must take their place amongst the local leaders who are seeking to actualize the ideal in the community. Teachers must realize that their obligation to the

HEAVES CURED



The worst case can be helped in a few days' treatment—and a positive cure is guaranteed or your money refunded. Don't sell or turn out a horse suffering with heaves, until you have tried

CAPITAL HEAVES REMEDY

For 24 years, this reliable preparation has been curing Horses and saving money for Farmers and Stockmen.

SEND FOR FREE TRIAL. Write today for full weeks treatment free, enclosing 5c. for postage and wrapping. Veterinary Supply House, 750 Cooper St., Ottawa.

PROUD CLARET

—99142— good enough to use on any herd. Scotch Shorthorn character. Bred right and priced right.

W. D. Forster - Copetown, Ont.
R.R. 1 Bell Phone, Ancaster 25-12

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Registered Clydesdale Stallion Silver Duke (10589). Sire, Silver Strand (imp.) (9643) (13192) foaled June, 1914. Brown with stripe. Enrolled and inspected. Farm 1. Address: Robt. Patterson, R.R. No. 4, Rockwood, Ont.



Sunnyside Herefords

Females all ages, choice bull calves, one full brother to sire of 1st prize bulls at Toronto, London and Guelph 1918. 1 year-old bull at farmer's press, car of bulls 2 and 3 years old; one 4-year-old bull would exchange for one of equal merit or younger bull. See them, they are priced to sell. Arthur F. O'Neil & Sons, Denfield, Ont., R. No. 2. Phone Granton

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We have a choice offering in young bulls, some fit for service, also a few females. For fuller particulars and prices write or come and see

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Imported and home-bred stallions and mares of the highest quality and individuality. Our record at the leading shows of America surpass all competitors, and we are offering for sale males and females of all ages, and should be pleased to hear from prospective buyers of quality Clydesdales at any time.

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Long-distance phone. Station. C. P. R.

Imported Clydesdale Stallion FOR SALE

Hartington (imp.) 19655 a four-year-old by "Signet" winner of the Highland Society's prize and one of the best breeding sires in Scotland to-day. Hartington was first at the Provincial Winter Fair, Guelph, 1917. First, Canadian National Exhibition, Toronto, 1918. Second at the Provincial Winter Fair, Guelph, 1918. He has both size and quality.

J. M. Gardhouse Phone 121 Weston, Ontario

I HAVE FOUR RED BULLS

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Aberdeen-Angus Cattle

An offering for quick sale—3 cows in good condition, age 4, 5 and 6 years. One with heifer calf at foot, the other two due this month. Can spare also a few heifers. James Smart, Beeton, Ont.

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We have a year-o
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and register farm
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School and the Community.

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 A Safe, Speedy and Positive Cure for
 Curb, Splint, Sweeney, Cappea Hook, Strained Tendons, Founder, Wind Fuffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

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Alloway Lodge Stock Farm
 Angus—Southdowns—Collies

Choice heifers bred to Queen's Edward, 1st prize Indiana State Fair. Bulls winners at Western Fair and Guelph.

Robt. McEwen, R. R. 4, London, Ont.

Springfield Farm Angus

I have six bulls from 8 to 15 months. All sired by Middlebrook Prince 5th, a son of Jock of Glencairn. Four of these are show calves. Also have other calves younger, and could spare a few heifers safely bred to same sire.

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 Bell Phone Fergus

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The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus, write your wants. Visitors welcome.

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Kenelworth Farm Angus Bulls

The strongest offering we ever had, all are sired by Victor of Glencairn and a number are ready for service. Prices reasonable.

Peter A. Thompson, Hillsburg, Ont.

Goodison Stock Farms Registered Hereford Bulls for Sale

We have 4-year-old Rex Ingleside Bull fit to head any herd, also George Ingleside one-year-old bull, both perfectly marked and in condition. Pedigree and register furnished. Write at once.

W. T. GOODISON - Sarnia, Ontario

community does not cease with the work done during school hours; they are citizens of the community and owe a debt of service to the community which cannot altogether be discharged between the hours of 9 a. m. and 4 p. m., five days a week. The community movement is looking to the school teachers for part of the trained leadership that it needs.

So far I have mentioned two factors in school circles—the plant and the teacher. A third factor is the school trustee; for without his co-operation little will be done through the plant or the teacher. Many a school building has been inadequately planned; many a school teacher's enthusiasm has been nipped in the bud by the near-sighted, over-cautious trustee. Yes, trustees must get the vision too. They should for instance provide the best accommodation possible in buildings, equipment and teaching staff. This would include, in addition to the regular equipment, provision for teaching domestic science, manual training and agriculture. There is no reason why these subjects should not be taught in all the larger schools; and a resident teacher in agriculture should be secured.

The trustees could also help the recreational life of the community by providing first of all suitable playground equipment for the children. It is surprising to find how many country schools, even in the larger centres have little or no provision made for meeting the children's need at play-time. Swings, slides, a merry-go-round, tennis courts, baseball and basketball grounds—all of these could be provided for at very little cost. Then with a playground thus equipped, the school could become the recreational centre for the adult section of the community as well as the playground for the children.

Some school boards in Wisconsin are going a step further and are combining the position of school principal with that of community secretary, offering one-third increase in salary for the extra work entailed. Were this lead followed in Canada more of our enterprising young men would make the teaching profession their life work.

Given school trustees with a community vision, the school teachers will be available as community leaders, and the school plant, grounds and equipment will become a centre through which the whole community can learn to "think together, work together, and play together." F. C. MIDDLETON.

Varieties of Grain.

At the experimental farm a good deal of work has been done in the testing out of different varieties of farm crops. The results of variety tests are given in Circular No. 16. The names of the varieties of cereals are tabulated in the order of merit for the different parts of Canada. For instance, some of the leading varieties in the different classes as given in the circular might be given: Fall wheat, Dawson's Golden Chaff; spring wheat, (late ripening) Red Fife; (early ripening) Marquis; (very early) Ruby; oats, Banner; Six-rowed barley Manchurian. The Arthur is placed at the head of the varieties of peas and Novelty is the name of the best flax for seed purposes. While these varieties have led at the various experimental farms, throughout many parts of Ontario the O. A. C. No. 72 oat and the O. A. C. No. 21 barley have been very popular. They are both exceptionally good varieties.

Occasionally there are times when a lie is the truth. The following story in the Methodist Centenary Bulletin illustrates that paradox: In Oregon there are many sloughs of mud or quicksand which are difficult and dangerous to cross. A certain Methodist missionary in that state, in the course of his travels, came to a slough which looked so formidable that he called a boy, who was chopping wood on the other side, and said: "Boy, is that a safe slough to cross?" "Oh, yes." "Has it a good hard bottom?" "Oh yes," said the boy. The man started to cross; his horse mired, and he had to dismount and wade out. Naturally he was angry. "Why did you lie to me?" he demanded. "Didn't you say the slough had a good hard bottom?" "Oh, yes," said the boy, "the bottom is good and hard, but you didn't get down to it!"

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No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow is a special favorite. Opens the furrow, sows all garden seeds (in hills or drills), covers, rolls down and marks the next row all at one operation. Hoes, plows and cultivates all through the season. A hand machine that will pay for itself in time, labor and seed saved in a single season.

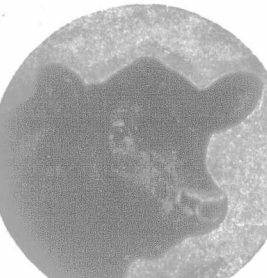
No. 12 Planet Jr. Double and Single Wheel-Hoe has hoes that are wonderful weed killers. The Plows open furrows, cover them and hill growing crops. The Cultivator Teeth work deep or shallow. The Leaf Lifters save much time in late work when plants are large or leaves too low for ordinary work. Crops are straddled till 20 inches high, then the tool works between rows with one or two wheels.

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Use Aberdeen-Angus Bulls on Your Grade Herd if You Want:

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Buy an Aberdeen-Angus Bull now and make real progress in Beef-Cattle production and improvement. Start a Pure-bred Herd of Aberdeen-Angus Cattle, as there is a shortage of this breed in Canada.

Canadian Aberdeen - Angus Association
 Brandon, Manitoba

36 Points for Aberdeen-Angus Sweepstakes

With the award of the grand championship for single steer to an Aberdeen-Angus at the Wichita show recently, the War Record of the "Doddies" went up to 36 points on the North American continent. From Edmonton, Alberta to Jacksonville, Florida; from Honolulu, Hawaii, to Syracuse, New York, beef making superiority has been shown by this breed under the acid test of war. Write for list of breeders and free literature.


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If you want a good breeding and show bull for the three-year-old class. I am offering the sire of the majority of our seven calves which we exhibited at 1918 shows. Or if you want one for the two-year-old class, can sell the junior champion at Toronto also 1st prize at Winter Fair, 1917. We also have useful bulls and females in good breeding condition for sale.

Jas. Bowman - Elm Park, Guelph, Ontario

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 Correspondence and Inspection Invited
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 Offers for sale two pure-bred Aberdeen-Angus cows, with calves at side, Middlebrook Beauty and Victoria of Larkin 2nd. L. E. & N. cars stop within a few minutes' walk of farm.
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Every farmer knows that a gate is no stronger than its weakest part—and that the weakest part is usually the hinge. When this becomes twisted, the gate sags, and its usefulness is gone.

We have succeeded in designing a gate that is strong throughout, but especially strong as to its hinges—so strong that it is impossible to twist its hinges out of shape, even a fraction of an inch. In the

Invincible Gates


the unique feature is the setting of the steel hinge plugs in the extreme corners—we weld them there by electricity. Also, we weld the pipe stays to the one-piece frame; with the result that we have a gate as substantial as if it were one piece of steel.

With hinges set wide apart, the gate swings easily on its posts; and there is no indirect or bending strain on the frame—the strain on this "Square cornered" gate comes right in line with the upper and lower hinges—where we have provided the necessary strength to withstand it.

You would expect such a gate to cost more than an ordinary one—but this gate costs you no more than the round-cornered style, in spite of its special features of design and special strength of construction. Invincible Fencing and Gates are sold and recommended by the better class of dealers throughout Canada; and the Farmers who have first-hand knowledge of their quality through years of use are telling their neighbors that there is true economy and very real satisfaction in buying these strictly high-grade "Made in Canada" Products.

Illustrated Catalogue showing the various styles of Gate we make, will be sent on request.

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5 lbs. and over.....	90c.	lb.
25 " " " " " " " " " "	85c.	"
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Freight paid and sacks free.
Net payment bank draft 60 days from date of invoice and 3% allowed for cash 10 days from date of invoice.
Particulars about varieties on application.
DR. M. O. MALTE,
Central Experimental Farm
Ottawa, Ont.

ANTICIPATION
will be greater than
REALIZATION
if you are not using a
Good Shorthorn Bull
I have a few imported ones ready for service, as well as several of my own breeding. The price is not high.
WILL A. DRYDEN
Maple Shade Farm Brooklin, Ont.

Cane Feeding Molasses

A wonderful fattening ingredient containing all the elements necessary to finish your stock. Used by the most scientific stock feeders in Canada. Don't delay—write for particulars immediately.

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AGAINST LOSS THROUGH DEATH BY ACCIDENT OR DISEASES
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Brampton Jersey Bulls

We are offering a half dozen young bulls of serviceable age at prices that should cheer them fast. Sample from our coming importation. These bulls are all from R.O.P. dams and sired by our best of Fyner and Raleigh herd sires.

B. H. BULL & SONS
BRAMPTON ONTARIO

Dual-Purpose Shorthorns

Herd sires Golden Duke (Imported), dam's official record 12,000 lbs. milk and 300 pounds butter-fat. Band milked cows 4½ lbs. milk, 10 lbs. butter, 10 lbs. straw, 10 lbs. hay, 10 lbs. feed.
CREDIT GRANGE FARM, Meadowdale, Ont.

History of the Horse in Lines.

FIRST evidences of the horse are found in fossils of a period long before the dawn of history, and beyond the reach of the present system of chronology, hence the first few paragraphs of this article, in respect to time, will of necessity be vague. In the main the approximate dates of the various stages of evolution in the horse are given.

From fossil remains the fact is fairly well established that the early man hunted and captured the horse for food, and that there were two varieties—one as large as the middle-sized horse of to-day, the other about the size of a large donkey. The largest specimens were not over 14 hands, and the average height was 13 h. 2½ in. We will not dig deeply into the earlier horse of some two million years previous, which had five toes, and was about the size of a fox, but will start with the horse as known to the first men, at which time he was, perhaps, the chief item of their food. In those days the horse's head was of abnormal size.

Late in the Bronze Age, or in the Early Iron Age, the horse was domesticated, perhaps first, by the Swiss Lake dwellers. Later the Turko-Tartaric tribes domesticated the horse for its milk, not having cows and goats, like other early people.

There is abundant proof that the early horses were captured by the lasso and belaboured with sticks and cudgels, probably later whips, to cow and subdue them.

Soon after being domesticated bridles were used. The first bridles were of rush, and were practically the same as our halters of to-day, with reins attached. The horse reached its greatest domesticity in the early days among the Libyans of Northern Africa. They rarely if ever used bits. The Europeans did use bits, the first being made of horn and bone, later of copper, bronze and iron.

From now on each paragraph will be preceded by the date of the occurrences described.

1800 B.C.—The country bordering the Black and Caspian seas were abundantly supplied with horses, but there were none in Egypt.

1712 B.C.—Joseph exchanged corn for horses during the famine in Egypt. That Moses I. is said to have captured horses on his expedition into the country beyond the Euphrates.

1700 B.C.—Libyan women rode horses astride, sitting on horse cloths. Pairs were driven and four-horse chariots sometimes seen. The Libyan horse was evidently higher in stature than other horses because other people found their horses too small to ride, and drove them until a good many centuries later. About this time, Aram, the Armenian King, had a war with the Medes and Cappadocians. All the combatants had large forces of cavalry.

1550 B.C.—In the reign of Ahmes I. chariots were used in Egypt, but do not appear to have been used before that time, although it is difficult to conceive that the Egyptians had kept horses for 150 years without putting them to some use. For a long period the chariots were used only for display and in time of war.

1500 B.C.—Horses were employed in the great city of Babylonia.

1450 B.C.—The Phœnicians had chariots when subdued by Joshua.

1400 B.C.—The Hittites had horses in Northern Palestine, and the Greeks were using them in chariots.

13 B.C.—King Erichthonius became the richest man on earth and owned 3,000 mares. He was, according to Virgil, the first to drive a four-horse team, but Virgil probably knew nothing of the evidences that the Libyans had done this centuries before.

1285 B.C.—Sisera used chariots when defeated by the Israelites.

1000 B.C.—The Trojans had white horses, which color was unknown to the Greeks and Asiatics, where yellow-dun seems to have been the prevailing color, with an occasional mention of dappled dun. At this same period the Libyans had dark bay horses with a white star in forehead.

975 B.C.—King Mu of China travelled in a chariot drawn by eight horses.

800 B.C.—All this time very few people

were riding them bareback. Assyrian chariots had pads.

648 B.C.—Instituted races had horses.

600 B.C.—Were common former inhabitants of Southern India.

520 B.C.—A system of horseback riding.

480 B.C.—Famous breed of horses.

437 B.C.—Showing sex of horses.

425 B.C.—Chariots in Persia.

401 B.C.—Phœnicians attached to spurs came.

400 B.C.—The Venetians of horses, their speed.

300 B.C.—Organized horseback riding.

170 B.C.—Gaul.

150 B.C.—Commencing Gauls had horseback riding.

50 B.C.—Horseback riding.

1 A.D.—Discard the people to do come into the four bridle, Venice, time, and attitude.

225 A.D.—Severus Alexander England.

356 A.D.—Into Arabia Cappadocia introduction.

380 A.D.—To-day, had Romans.

500 A.D.—Had come into use.

600 A.D.—Into use.

1066 A.D.—Imported Spanish pacers as stallions from this was the lighter breed running race just outside.

1325 A.D.—Spanish horses.

1493 A.D.—Into America.

1500 A.D.—Travelling, pacers in Egypt that time before.

1511 A.D.—Domingo making the efforts in and Mexico.

1519 A.D.—Horses and Cortez brought in eighty.

1525 A.D.—With horses.

1528 A.D.—With horses.

1539 A.D.—The Mississippian After his leaving four may have several horses.

1590 A.D.—Indies and expresses pacers among.

1604—Into Canada.

1609—Into Virginia during the winter.

1613-14—On Canada of their horse.

1629—

of the Horse in Lines.

ances of the horse are found period long before the dawn beyond the reach of the n of chronology, hence the nographs of this article, in will of necessity be vague. the approximate dates stages of evolution in the n.

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were riding horses and such as did, rode them bareback, but about this time the Assyrians commenced to use cloths and pads.

648 B. C.—A race for riding horses was instituted in the 33rd Olympiad. Chariot races had been in vogue before that.

600 B. C.—The Greeks and Scythians were commencing to ride horseback, the former using cloths. The Sybaris of Southern Italy were using cavalry, the inhabitants of Northern Italy were riding.

520 B. C.—Darius the Mede established a system of equine couriers.

480 B. C.—The Nisseans were raising a famous breed of white horses in Asia.

437 B. C.—The Parthenon friezes made, showing several horses in pacing attitudes.

425 B. C.—Alcibiades entered seven chariots in one race.

401 B. C.—In the battle of Cunava, the Phenicians used chariots with scythes attached to the wheels. Common prick-spurs came into use about this time.

400 B. C.—For a considerable period the Venetians had been raising a breed of horses, many of them white, noted for their speed. The breed finally died out.

300 B. C.—The Celts of Noricum had organized cavalry.

170 B. C.—Roman horses exported into Gaul.

150 B. C.—Popularity of the chariot commencing to wane. The Transalpine Gauls had taken to horseback.

50 B. C.—The Belgic tribes take to horseback.

1 A. D.—The British commence to discard the chariots, one of the last people to do so. Horse-shoes may have come into occasional use about this time. The four bronze horses on St. Marks, in Venice, were doubtless cast about this time, and show horses in a pacing attitude.

225 A. D.—The Roman Emperor Severus Alexander organized racing in England.

356 A. D.—Emperor Constantine sent into Arabia two hundred "well-bred Cappadocian horses," which was the introduction of horses into that country.

380 A. D.—Saddles, similar to ours of to-day, had come into wide use by the Romans.

500 A. D.—Regular shoeing of horses had come into vogue.

600 A. D.—Stirrups were just coming into use.

1066 A. D.—William the Conqueror imported Spanish horses into England.

1190 A. D.—FitzStephen writes about pacers as saddle horses in England.

1200 A. D.—King John imported heavy stallions from Flanders into England. This was the time of the "great horse" and heavy armour. There was also a lighter breed of horses in England, and running races were held about this time just outside of London.

1325 A. D.—Edward II. imported Spanish horses into England.

1493 A. D.—First importation of horses into America by Columbus. All perished.

1500 A. D.—An Italian ecclesiastic, travelling, expresses surprise on seeing pacers in England, a gait that had by that time become extinct in Italy.

1511 A. D.—Spaniards settled in San Domingo and began to raise horses, making that a centre for colonization efforts in North and South America and Mexico.

1519 A. D.—First importation of eleven horses and five mares into Mexico by Cortez. Shortly afterwards Alvarado brought in twenty horses and Naevaez eighty.

1525 A. D.—Allyon landed in Florida with horses, but was forced to turn back.

1528 A. D.—Narvaez landed in Florida with horses, but had to kill them for food.

1539 A. D.—Importation of horses into the Mississippi Valley by De Soto. After his death the expedition returned leaving four or five horses behind, which may have been the progenitors of the feral horses of our Western States.

1590 A. D.—A traveller in the West Indies and South America from England expresses surprise in not finding any pacers among the horses.

1604.—Importation of French horses into Canada.

1609.—Importation of English horses into Virginia, but these were devoured during the famine of the following winter.

1613-14.—Virginians made two raids on Canada and captured most, if not all, of their horses.

1629.—Importation of Dutch horses

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is evident from the insistent demand for more and more K. & S. Canadian Tires—the tried and trusty conquerors of Canadian roads.

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Some choice young cows with calf at foot, also some open heifers and heifers in calf to Gainford Supreme.

We have also for sale some choice young bulls.

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We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

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Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

Spring Valley Shorthorns—Herd headed by Sea Gem Pride =96365=.

Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and a few females. Write for particulars. Telephone and telegraph by Ayr.

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Bright Prospects

It looks as though the demand for beef will be strong for some years to come, and the man who is in line for greatest profits is the Shorthorn Breeder.

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W. A. DRYDEN, President
Brooklin, Ont.
C. E. DAY, Secretary
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Ont. 21

Shorthorn S

FOR SALE

Two Scotch Shorthorn bulls both low down and thick. One is 18 months Kilblean beauty, from the Marr bred cow Scotch Thistle (imp.), and a seven months English Lady a show proposition. Both are sired by one of the best breeding sons of Right Sort, (imp.).

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Present offering 2 choice bulls sired by the Duke whose dam gave 13,599 lbs. of milk and 474 lbs. of butter fat, R. O. P. test: One dark Red 8 months. The other Roan 13 months. Can also spare a number of females.

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The Hawthorn Shorthorns

Just one extra good red bull left, 11 months, by our herd sire. Priced to move. Females all ages, Clydesdale fillies and Leicester Sheep.

ALLAN B. MANN, The "Hawthornes," Peterboro, Ont., R.R. 4.

EVERGREEN HILL FARM

R. O. P. SHORTHORNS

Yearling bulls all sold. Could spare a few calves of either sex, two to four months old.

S. W. JACKSON Woodstock, Ont.

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Present offering: 6 choice young bulls and a few females, their dams are good milkers and best of breeding. Prices moderate.

STEWART M. GRAHAM, Lindsay, Ontario

Dual-Purpose Shorthorns

A few young bulls of useful age, will be sold right, also a number of cows and heifers. Can spare a few Dorset yearling ewes and rams.

Valmer Bartlett, R.R. No. 4, Canfield, Ont.

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Herd headed by Dominator 106224 whose two nearest dams average 12,112 pounds of milk in a year. Cows in the herd with records up to 13,891 pounds of milk. Cows in calf to Dominator priced to sell.

WELWOOD FARM, Farmer's Advocate London, Ontario

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We have for sale a number of young bulls fit for service and a few choice heifers.

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We are offering seven high-class Scotch females and two bulls from our herd sires Trout Creek Wonder and Gainford Eclipse. These cattle are around a year old, colors red and roan and in the best of condition, fit either for show or foundation stock. See these, if in the market for high-class distance Phone.

D. Brown & Sons, Shedden, Ont., P.M., M.C.R. Twelve miles west of St. Thomas. Long

Beach Ridge Shorthorns and Yorkshires

Shorthorn herd headed by Sylvan Power 95871, a junior champion on Canadian circuits, both sex, for sale; also young cows with calf at foot or in calf to Sylvan Power. We can supply any want in Yorkshires.

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Glengow Shorthorns

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in purple

WM. SMITH, COLUMBUS, ONT.

Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

into New York and English horses into Salem and Boston (these were from Leicestershire). From the English horses may have descended the Narragansett pacer.

1635.—Importation of three stallions and twenty-seven mares from Holland into Salem, Mass.

1638.—Swedish settlers on the Delaware River bring some of their native horses, probably pacers. The Swedish pacer is thought by some to have been the progenitors of the early pacers of England.

1640.—New England begins exporting horses to the Barbadoes.

1643.—A cargo or two of Dutch imported into New York from the Dutch West Indies.

1647.—Dutch horses from New York exported into Virginia.

1649.—There were 200 horses in Virginia at this time.

1649-1660.—Importation into England of Place's White Turk, Morocco Barb and Hemsley Turk.

1657.—Siege of Azof, when horses were liberated which are supposed to be the progenitors of the native horses of Northern Asia and Northern China.

1660.—Average height of the native English stock 13 hands.

1660-1685.—Importation into England of Damascus Arabia, three Turks from Hamburg, and the Royal Barb or Turkish mares.

1665.—Importation into Canada of horses from Picardy, France.

1668.—Virginia began to export horses. Many of their horses ran wild.

1685-88.—Importation into England of the Byerly Turk and Stradding Turk.

1690.—Horses were the leading item of export in Rhode Island.

1670.—Stage coaches commenced to come in use in England. Four-wheeled carriages had been used before.

1700.—The pacer had practically disappeared in England.

1702-14.—Importation into England of the Darley Arabian (1711), Curwen's Barb and Carlisle Barb.

1708.—There were 2,363 horses in the Virginia light horse artillery. Earliest records of English racing began about this period.

1727-53.—Importation into England of the Godolphin Arabian (died 1753).

1730.—First English running horse imported into Virginia.

1750.—The average size of the native stock of Virginia, was then 13 h. 2 in. Racing in New Jersey was becoming a nuisance.

1768.—The average height of the Narragansett and Massachusetts horse was 14 h. 1 in. in Virginia and South Carolina 13 h. 2 in., in Connecticut, 13 h. 3 in., in Pennsylvania 13 h. 1 1/4 in. In Virginia there were twice as many pacers as trotters. In the other colonies the horses were almost all pacers.

1770.—Count Orloff began breeding trotters in Russia.

1778.—The horses of New York average 14 h. 1 in. About one-half were double-gaited, one-quarter trotters, one-quarter pacers.

1784.—Barrs, the father of the Orloff trotter was foaled.

1788.—Messenger imported to America from England at the age of eight.

1806.—Mambrino foaled; Yankee trotted mile in 2.59.

1810.—Boston Horse trotted mile in 2.48 1/2.—From the Live Stock Journal, London, England.

Gossip.

Hood Farm, Lowell, Mass., have recently issued the folder giving the pedigrees and description of some of the Berkshires in the breeding herd. Among them is Longfellow's Double, a strong-topped, deep, thick-bodied pig which stands well up on his feet and weighed 507 lbs. when one year old. This sire has been successful in winning championships at the largest fairs across the line. Baron's Successor, sired by Lord Premier's Successor, is another of the good sires in service at Hood Farm. Not only is he a show animal but his progeny have been successful in the keenest competition. Seven of his progeny sold at the International Sale for an average of \$380. The progeny of Longfellow's Double secured one hundred and eighteen prizes at the larger shows in 1917-18. The folder issued by this Farm gives illustrations of some of the stock in the breeding herd. Males and females are for sale.

Making

Concrete concrete made on the spare time of the farmer. There is no need of a poor fence, adds more to the life of the posts.

To make winter months to see that before setting where there be found on.

There are obtain good posts that even have well in.

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and eighteen prizes ws in 1917-18. The

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males are for sale.

Making Concrete Posts on the Farm.

Concrete fence posts are one of the concrete products that can be successfully made on the farm. Some of the farmer's spare time during the winter months can be put to good advantage in this work. There is nothing which detracts more from the appearance of a farm than a poor fence, and there is nothing which adds more to the appearance, efficiency and life of a fence than good durable posts.

To make concrete posts during the winter months precaution must be taken to see that the materials do not freeze before setting. A place for this work where there is no danger of freezing can be found on every farm.

There are certain requirements to obtain good results in making concrete posts that every user of concrete should have well in mind:

Use new cement that is free from lumps.

Use clean, coarse sand.

Use gravel or broken stone that is well graded; free from soft material such as clay, organic matter, etc.

Use enough cement. A rich mixture of 1 part cement, 1 1/2 of sand, and 3 of broken stone not larger than 3/4 inch, is best for posts.

Mix cement and sand thoroughly while dry.

Add broken stone and water and continue mixing. Concrete mixed for a period of five minutes is much better than when mixed for one minute only.

Proper amount and proper placing of reinforcing is essential. Four 1/4-inch iron rods are necessary. Place these near each corner of the posts.

Have well-made forms. There are many good patented forms on the market, but home-made forms have given just as good satisfaction.

Clean and oil form with a heavy oil before pouring concrete.

Leave posts in mold for at least twenty-four hours. In damp weather a longer period is necessary.

Keep posts moist the first week while curing. Allow them to season one month before using.

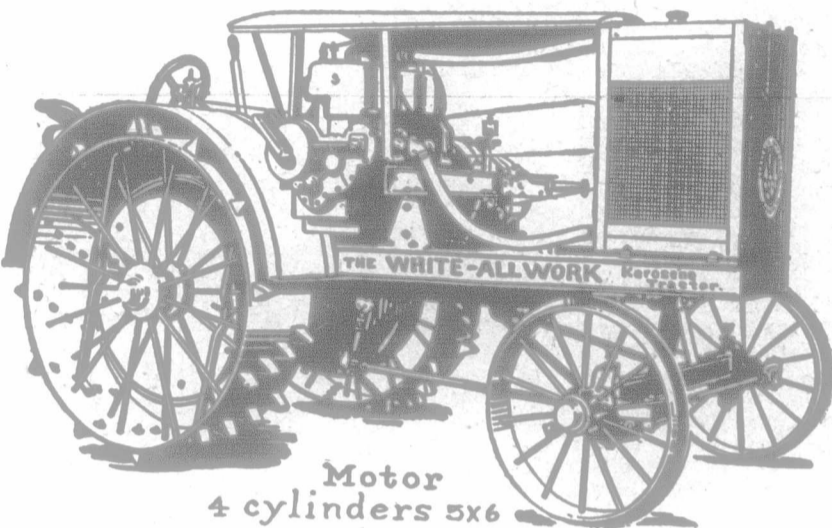
Handle concrete posts with care. They cannot be thrown from a wagon like wooden posts.—E. W. LEHMANN, MISSOURI COLLEGE OF AGRICULTURE.

One Barberry is Harmless —Don't Destroy It.

When you've sharpened up your shovel, and you've ground your rusty axe, and thrown aside your coat and hat and started making tracks to reckon with those barberries which spread rust everywhere,—you're on an urgent business, but go slowly and with care—do not on harmless bushes let your hand of vengeance fall, for there's a small barberry that never rusts at all. It's the Japanese variety and differs from the pests to which it is related by these quite conclusive tests: Its leaves are small and spoon-shaped, always green, and free from spines, that adorn the cut leaf edges of the bush where stem rust dines. Barbed and thorny are both bushes, but they differ in degree,—to every spine the good bush has, the other one has three. No matter what the season, be it winter, spring or fall—the triple spines on bushes condemn them, one and all. Then in spring when Mother Nature dons her robe of verdure green, and flowers start to blooming on every growing thing,—if you scan the yellow flowers on the bushes in your yards, you'll find they grow in clusters on the bush with triple barbs; while the Japanese barberry for whose safety we're concerned as if trying to be different from the bush that should be burned—bears its flowers, like its principles, solitary and alone. Later on to fill the places of the flowers that are gone are some beautiful red berries, and I've heard the women tell of gathering them in autumn and of using them for jelly. The arrangement of the berries like the flowers from which they grew affords an easy method of distinguishing the two. If by now, you've looked them over and decided they're the pest, pick up your axe and shovel and don't stop for any rest, till you've sent the last barberry on its final journey "West".—E. L. SARGENT, Colorado Agr. College.

White Tractors and Threshers

"THE FIRST QUALITY LINE"



White—Allwork Tractor—14-28 H.P.—the largest engine on any 3-plow tractor—weighs only 4,800 lbs.

For that very reason White Tractors and Threshers have always been built with great overstrength in every vital part. The unusual strain is provided for. Parts that receive the most wear are made extra durable and strong. The whole effort of this big organization is directed entirely on making the best threshing machinery that can be produced.

Should any accident occur in a White machine, we provide very prompt repair service. This is a day and night service. Orders received during the night are shipped on the early morning trains. When a man deals with us we intend to give him the best he can possibly buy and the best service after he has bought.

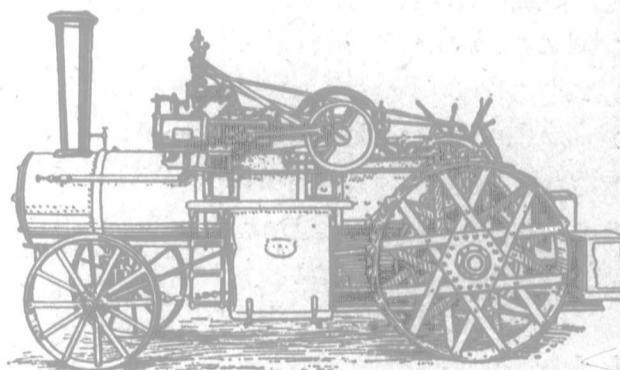
Correspondence is invited with farmers or threshermen who require gas or steam tractors, or threshing machines. We have lived with this business and grown up with it. If there is any information you need we can, and will, give it freely.

The Geo. White and Sons Co., Limited,

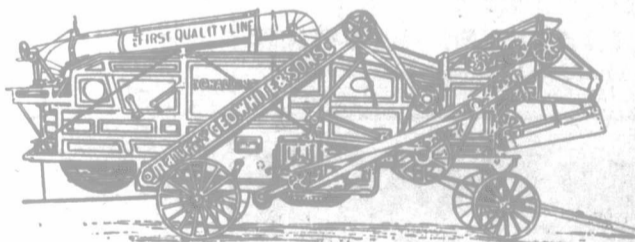
Moose Jaw, Sask.

London, Ontario

Brandon, Man.



White Steam Tractors 17 H.P., 20 H.P., 25 H.P.—practical and economical all-purpose tractor of proven merit.



White Challenge Thresher No. 1 Specially designed for gas tractors. 24-inch cylinder, 40-inch body.

Robert Miller, Stouffville, Ontario

Has EIGHT of the best young bulls that he had owned at one time, good ages and beautifully bred. Also several cows and heifers, some of them with calves at foot, others in calf to Rosemary Sultan the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high, it will be paid.

Pure Scotch and Scotch-Topped Shorthorns

We have several choice young bulls of the best of breeding and ready for service. Two are by Rapheal (imp.), one by Right Sort (imp.), one by Sittyton Selection, and several by our present herd sire Newton Cedric (imp.). Prices right.

R. M. MITCHELL R. R. No. FREEMAN, ONTARIO

Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (imp.). Our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

PRITCHARD BROS., R.R. No. 1, Elora, Ont.

Choice Shorthorn Females

Mysies, Rosemarys, Clementinas, Missie, Miss Ramsdens, Cruickshank, Fragrance, etc., all good pedigrees and all good breeding cattle in calf to good bulls. Prices right. Also a few bull calves. Correspondence solicited.

JAS. K. CAMPBELL & SONS, PALMERSTON, ONT.

Highland Lake Farms

For Sale: Two extra good (30-lb.) thirty-pound bulls ready for heavy service. Priced to sell. Also younger ones by a son of May Echo Sylvia.

R. W. E. BURNABY - JEFFERSON, ONT. Farm at Stop 55, Yonge St. Radial

English Dual-Purpose

Shorthorns

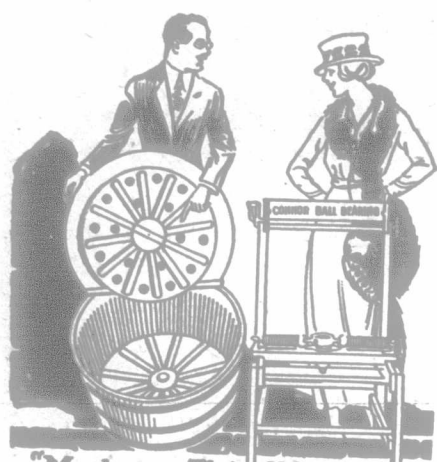
For sale: Bull calves and young bulls. English bred for milk and beef. The right kind to head Canadian herds to increase profits. From very moderate prices and up. English Large, Black Pigs. A great bacon type, long and deep, thrifty. Come or write.

LYNNORE STOCK FARM

F. Wallace Cockshutt Grantford - Ontario

Mardella Shorthorns

Herd headed by The Duke, the great, massive 4-year-old sire, whose dam has 13,500 lbs. of milk and 474 lbs. of butter-fat in the R. O. P. test. I have at present two exceptionally good, young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call. THOS. GRAHAM - FORT PERRY, ONT. R. R. No. 5



"Madame, This Washer is simplicity itself"

So convenient and simple in construction, a large roomy tub without any obstruction inside the tub. The rub-board is hinged to the slusher and when open the water and suds drain back again into the tub. No more sloppy kitchens, when you use a

CONNOR WASHING MACHINE

Give us the opportunity to tell you more about this Washing Machine. We will mail you handsome booklet on request.

J. H. Connor & Son, Ltd.
OTTAWA - ONTARIO

TOP DRESS
All Crops with Nitrate of Soda, no matter what other fertilizers you may have used—100 pounds per acre for seeded crops and 200 pounds per acre for the cultivated ones. The increase will yield large profits over cost.

Write on post card for our money making books

WILLIAM S. MYERS
25 Madison Avenue, New York

BOG SPAVIN

Cure the lameness and remove the bunch without scaring the horse—have the part looking just as it did before the blemish came.

FLEMING'S SPAVIN CURE (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

75 FLEMING BROS., Chemists
Church Street, Toronto, Ont.

Cream Wanted

Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

Ontario Creameries LIMITED
LONDON - ONTARIO

Feeding and Caring for a Flock of Pure-bred Sheep.

If the greatest profit is to be realized from a flock of pure-bred sheep they must receive the very best feed and care the shepherd can give them. Not that they of necessity require greater care and feed than the grade, but the fact that the breeder of a pure-bred flock expects to put the most of his surplus stock on the market as breeders means that he must feed the best and give the best care possible, that his stock may reach its best development.

At the Experimental Farm, Nappan, this has been well brought out in the feeding and caring of the pure-bred flock. It was found that even during the summer season the pure-bred flock could not be neglected, otherwise the results would be found to show in the following seasons increase and development of the young.

The flock must have a good pasture with not too rank a growth; preferably a short, thick bottom growth with an abundance of clover and plenty of good running water to which the sheep can easily get. Sheep take much more water than the average farmer would think. This holds true especially in winter.

Just before the breeding season the ewes should be culled; all undesirables taken out; and a certain period given between weaning and breeding time for the ewes to get into condition again. Best results are obtained where the ewes are turned in a nice clover field and flushed just before mating season. It is found that where ewes and rams are in the best of health and condition a greater percentage of twins and triplets is dropped. All ewes should be tagged before the mating season. The best time to breed is in the fall. If you have warm quarters for the ewes and lambs it will pay to have the lambs dropped early; otherwise it is not advisable to do so. It is also found that a small flock of twenty to twenty-five per pen is better than a large one. When ewes go into winter quarters they should be supplied with good, well-cured clover hay. The next best is mixture of clover and timothy. Pulped turnips at the rate of from 2½ to 3 pounds per head per day should be given up to within a month of lambing, with the addition of ½ to 1 pound of a meal mixture (100 oats, 100 bran and 50 oil cake). This will keep the ewes in a good, thriving condition. For the best results, ewes should not be too fat, especially at lambing time. We have had our heaviest losses from over-fat ewes. Just previous to lambing (say about a month) the turnips are gradually cut down to nothing. The percentage of bran, if it is good, is increased slightly until after the lambs are dropped. Then the oats are increased, as there is nothing like good oats to stimulate the milk flow. Salt should be supplied at all seasons of the year. A careful watch over the flock at lambing time will often save the lives of many lambs that will, at the end of six or seven months, be worth \$25 to \$30 each.—Experimental Farms Note.

Gossip.

E. Barbour & Sons' flock of Oxford Downs was very successful in the show circuit last year, not only in Eastern Canada but throughout the Western Provinces as well. For instance, at Brandon they won five firsts, champion and reserve for ram and reserve champion for ewe; at Edmonton and Calgary they were very successful with rams and ewes of different ages, and also with their aged and lamb flocks. The individuals which they have are typey, strong-framed, and show breed character.

Charles Graham, of Port Perry, writes that through the medium of "The Farmer's Advocate" he has disposed of a straight, fleshy, roan bull of the Henrietta family, to George Harrison, of Lakefield. J. Green, of Westport, also secured a roan bull, and H. Lancaster got a nice red heifer of the Lavinia family. Henry & Fawcett, of Horning's Mills, also purchased a choice Lavinia heifer, and W. A. Walker, of Manitoba, purchased a two-year-old heifer and a bull calf of the same family. This Lavinia family has produced many females that are heavy milkers and which flesh up well. W. N. Burgess, of Port Elgin, got a sweet, suppy heifer of the Favorite family.

Proved by Hundreds of Tests

It is impossible for the Dairy Farmers to blend and balance their stock feeds as they should be to get maximum results.

CALDWELL'S CALF MEAL

is mixed and blended only after hundreds of tests have been made, that is why we are confident as to results. Further, it enjoys the recommendation of leading stock men.

You can therefore sell your whole milk very profitably, and feed your calves Caldwell's Calf Meal. It is a complete substitute for whole milk.

Your dealer most likely carries this meal, if not we will give you the address of the nearest dealer who does, or ship direct.—Write us.

The Caldwell Feed & Cereal Co., Limited
Dundas - Ontario.

We operate the largest exclusive feed mills in Canada—and are makers of all kinds of high-grade stock and poultry feeds. We can send you prices and information on any rations you require.

HOSPITAL FOR INSANE

HAMILTON - ONTARIO

Present herd sire is one of the best sons of King Segis Alcartra Spofford. We have three of his sons born during May and June last, and also a grandson of Lakeview Lestrage. Apply to Superintendent.

Premier Echo Sylvia DeKol No. 38053

814.8 lbs. of milk with 33.96 lbs. of butter in 7 days, 120.8 lbs. in one day is the average for the dam, sire's dam and sire's sister of this young bull that I am offering for immediate sale. He was born Nov. 17, 1918 and is a very fine individual. More black than white.

Write at once for extending pedigree and price.

H. H. BAILEY, Manager, OAK PARK STOCK FARM
PARIS, ONTARIO, CANADA

At Service—Son of Ormsby Jane King

ORMSBY JANE HENGERVELD BURKE

The services of our 18 months herd sire are now open for a limited number of approved cows—at a moderate price. Individually, he is one of the strongest young sires of the breed and his sire Ormsby Jane King is a son of Ormsby Jane Segis Aaggie (the great white heifer) 46.33 lbs. of butter and 879.40 lbs. of milk in 7 days. The dam of this great young sire, Dolly Hengerveld Korndyke is a 21.75 lb. two-year-old daughter of Earl Burke Korndyke and he again is a 31.30 lb. grandson of L. I. METCALF J. D. STEVENS R. R. STEVENS

Bowmanville, Ontario

YOU! MR HOLSTEIN BREEDER

How would a 16 months son of Duchess Aaggie Wayne do for your next herd sire? She is a 26.96 lb. 4-year-old and a sister to Calamity Snow Mechthilde, the Canadian champion three-year-old R.O.P. cow who has just completed another R.O.P. record of over 25,000 lbs. This youngster is a great individual and sired by Canary Hartog. We also have others younger, as well as females.

Walburn Rivers & Sons Pioneer Farm, R.R. No. 2, Ingersoll, Ontario

Holstein Bulls and Females—Only four bulls left—of serviceable age. All should sell them. Two are sired by May Echo Prince, ¼ brother to May Echo Sylvia. Can also spare a few nice straight heifers and young cows bred to our 33-lb. sire Gypsy Pontiac Cornicopia. Prices right. **JOS. PEEL, Port Perry, Ont.**

Silver Stream Holstein—Special offering: One bull fit for service, a fine individual. Dam, a daughter of King Lyons Hengerveld, whose five nearest dams average 31.31 lbs. butter in 7 days. Sire a son of King Lyons Colantha, his six nearest dams average 30.10 lbs. butter. We also have others younger. Write at once for prices, or better come and see them. Priced to sell.

JACOB MOCK & SON, R.R. 1, TAVISTOCK, ONTARIO

6 BULLS BY ESCANNA FAVORITE

A son of the famous Right Sort (imp.). All are ready for service and priced to sell. We have others younger and could spare a number of young cows calving early to the service of the same sires. Write, don't delay.

W. G. GERRIE C.P.R. Station on farm. Bell Phone BELLWOOD, ONTARIO

When writing advertisers will you kindly mention "The Farmer's Advocate."

Questions and Answers.
Miscellaneous.

Raw Furs.

Will it hurt raw furs to keep them over summer? Do skunk hides become unsalable?
J. M. H.

Ans.—More or less difficulty will be experienced in holding the raw hides over the warm weather. It is advisable to sell them when they are fresh. Unless taken care of, hides of any animal will become unsalable in time.

Improving Quality of Milk.

Can the quality of milk or butter-fat be improved by increasing the feed?
A. D. J.

Ans.—It is the common opinion among stockmen that the quality of the milk depends largely on the individuality of the animal and upon the stage of lactation. Feeding will increase the flow of milk but has little influence upon the quality of the milk. There are exceptions to the rule, however, and some have been able to increase the test by the use of certain feeds in large quantities. Excitement will often cause a variation in the test. A cow nearing the end of the lactation will usually test higher than at the first.

Victory Bonds—Cow not up to Quarantary.

1. If a person, whose estate is invested in Victory Bonds dies without a will can Government claim same?
2. A buys a cow from B for \$125. B guaranteeing her to be alright. When the cow calves she has a blind teat, can A claim damages? If so how much? What action should he take?
Ontario J. M. H.

Ans.—1. No.
2. A has a right of action for damages for breach of warranty, and may sue in the Division Court. The amount would be whatever the Court might consider reasonable.

Before resorting to litigation A ought to make an earnest effort to get an amicable settlement.

Hydro Tree Cutting.

I have two large black walnut trees in my front yard near the road fence, with some branches overhanging the Hydro electric wires. The trees were practically as large and as great a danger to the line when it was erected as they are now.

1. Can the H. E. Company cut these trees down in spite of my protests?
2. If not, can they cut off the branches overhanging their wires, but which do not touch the wires?

3. Does the law allow the Co's employee to be the sole judge as to the amount of cutting necessary to be done?
Ontario E. M.

Ans.—1. Yes.
2. Yes.
3. It allows the Hydro-Electric Power Commission to fell or remove any tree or limb thereof which, in the opinion of the Commission, it is necessary to fell or remove, and the Commission, of course, act through their employees.

De-horning Cattle.

1. When is the best time to de-horn cattle? Will it hurt cows about due to freshen to dehorn them? Will it lessen the flow of milk? Is there any danger of cows aborting through the sight of blood in the stable?
2. What is a prescription for a condition powder for horses?
H. D. G.

Ans.—1. Dehorning should be done when the weather is moderate, and before the fly season. March and early April is a very good time of the year to de-horn cattle. We would not care to de-horn cows heavy in calf. There is some danger of them losing the calf. Most cows will fall off in the milk flow a little, but once the wound is healed will usually come back to normal.

2. A teaspoonful of the following three times daily, makes a very good condition powder: Equal parts sulphate of iron, gentian, ginger, and nuxvomica. The horse should be fed well and given daily exercise.

A. McKenzie, of Oshawa, who is now in his eighty-sixth year, in renewing his subscription writes that he has taken "The Farmer's Advocate" since it was a pamphlet of but a few pages issued monthly. "I much appreciate the journal and consider that it is one of the best farm magazines in the Dominion," said Mr. McKenzie.

How to Get Better Yields of Milk

Many a farmer has been perplexed after learning something about rationing to discover that his feeding is not producing results. Many feeds are high in milk-producing protein but fail because the feed is so indigestible that little of it is absorbed into the system. Getting that digestibility factor right is one of the niceties of rationing which has been taken care of in

Monarch Dairy Feed

Its high digestibility means that a maximum amount of nutrient elements is assimilated. Therefore you get more feed value from Monarch than from other feeds. It means both economy and better yields of milk.

Monarch Dairy Feed is composed of oil cake meal and cottonseed meal, both of which are rich in protein. For bulk there is bran, corn feed and barley feed. The proportions have been calculated with the utmost accuracy for producing better yields of milk. The proper balance of oil cake meal and cottonseed meal prevents constipation that takes place when cottonseed meal is used alone. Monarch is palatable and highly digestible. To keep your cows in best condition the year around, thus getting better yields in the milking season, it certainly will pay you to use Monarch always. Guaranteed analysis: protein 20%, fat 4%.



Get a ton from your dealer. If he does not sell Monarch, write us direct, giving dealer's name.

The Campbell Flour Mills Co., Limited

West Toronto 54

Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pietertje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long.

RAYMONDALE FARM
Vaudreuil, Que.

Write to-day.

D. RAYMOND, Owner,
Queen's Hotel, Montreal

33-LB. GRANDSONS OF LULU KEYES

I have at present ten young bulls all sired by my own herd sire, King Korndyke Sadie Keyes, a son of Lulu Keyes, 36.05 lbs. of butter and 785 lbs of milk in 7 days. These youngsters are all first-class individuals, and their dams' records run as high as 33.28 lbs. of butter in 7 days. Several of them must go quick to make room.
D. B. TRACY (Hamilton House Farms) COBOURG, ONT.

Sunnybrook Holsteins!

The Bull is the first consideration!

We have a few for sale highly strained in the blood of the World's Record cows, all sons of Sir Lyons Hengerveld Segis (one of Canada's greatest bulls). Nothing offered that is not from high testing dams. Inspection invited. Write for particulars.

Jos. Kilgour, Eglinton P.O., North Toronto

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.

Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway

6 BULLS BY KING SEGIS PONTIAC DUPLICATE
Brother to the \$50,000 bull. Three of these are ready for service and all are show calves. Write us also for females. We are pricing a number of heifers, bred to our own herd sire, Sylvius Walker Raymondale, a grandson of the great May Echo Sylvia. We now have bull calves a few months old by this sire. Let us know your wants. R. W. WALKER & SONS, Manchester Station, G. T. R. Port Perry, Ont., R. R. No. 4.

Elderslie Farm Holstein-Friesians

Special offering—One bull fit for service, fine individual; dam gave 195.26 lbs. milk, 782.50 lbs. butter for year. He is a son of Judge Hengerveld De Kol 8th, who is a 32.92 lb. grand son of De Kol 2nd. Butter Boy. We have others younger equally as well bred. Write at once for prices or better come and see them. (Take Kingston Rd. cars from Toronto, Stop 37.) A. MUIR, Scarborough P. O., Ont.

Cream Wanted

Ship yours to us, as we must have it to supply our well-established trade with good quality butter. Therefore, we are prepared to pay you highest market price paid. We furnish cans and pay express charges. References any bank.

Mutual Dairy & Creamery

743 King Street West
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Messrs. A. J. Hickman & Co.

Halse Grange, Brackley, England (late of Egerton, Kent)
Exporters of all breeds of stock, draft horses, beef cattle and show and field sheep are specialties. You can buy imported stock, through us cheaper than in any other way, and we hope to get your enquiry at once, so that we can fit you out before this country is skinned of good stock, as it soon will be now the war is over.

Holstein Bulls

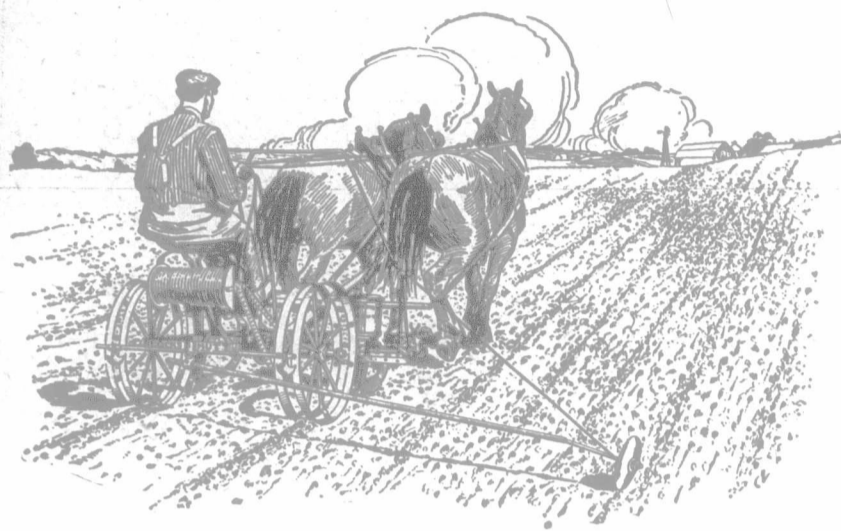
15 ready for service, 1 younger. From dams with 32.7 lbs. butter in 7 days to those priced for the most conservative buyer. Females also.
R. M. HOLTBY
R. R. NO. 4, PORT PERRY, ONTARIO

Fairview Holstein-Friesians

Owing to lack of help, I offer my entire herd of thirty head, or part of it, mostly two and three-year-olds (milking), sired by bull with 90 lbs. a day on both sides.
FRED. ABBOTT
R. D. No. 1 Mossley, Ontario

Tests
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Ingersoll, Ontario
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King Lyons Colantha, his
Write at once for prices.
TAVISTOCK, ONTARIO
DRITE
ed to sell. We have others
service of the same sires.
BELLWOOD, ONTARIO
Farmer's Advocate."

Cockshutt Corn Planter



- It is Simple**
Requires no special skill to run—all working parts in plain sight.
- It is Durable**
Best of materials—proper design; no breakdowns at critical times.
- Has Variable Drop**
Plants thick or light to suit the land without stopping the machine.
- Evenly Balanced**
Makes easy work, light draft, and less neck weight for horses.
- Very Adaptable**
Plants 2, 3 or 4 kernels per hill, or drills it in rows—as you wish.
- Fertilizer, Too**
Special attachment, works automatically, sows any desired amount.

Plants Seeds in Hills or Drills it in Rows

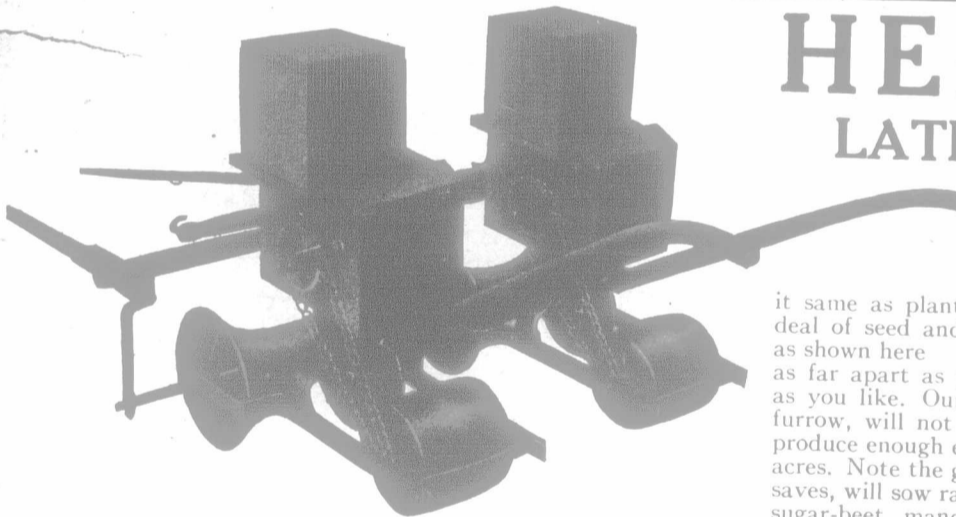
Here is an Implement we are proud of. Every feature in it has been tested and proven hundreds of times in field. Its variety of work, its convenience, its established superiority—yet its simplicity and absence of intricate mechanism, make it ideal for Canadian work. You needn't dread a short planting season and "green" help if you use a Cockshutt Corn Planter. Anyone who can drive can plant a model field.

We say, write at once for our new, Illustrated Corn Planter Folder. You'll get a lot of good information in it that will help you this season.

COCKSHUTT PLOW CO.
LIMITED
Brantford, Ont

Sold in Eastern Ontario,
Quebec and Maritime
Provinces by

THE FROST & WOOD CO.
LIMITED
Montreal, St. John SMITH'S FALLS,



HEMME'S LATEST SEEDER

Will sow either on drills or level. It will sow seed exactly where you want it and not waste any where you don't want it same as planting by hand, thus saving a great deal of seed and labor in thinning as seed is sown as shown here ... or ... as far apart as you like to set it and as many as you like. Our large steel disc turn cutting the furrow, will not trail seed or fertilizer. You will produce enough extra roots to pay for it on 1 or 2 acres. Note the great amount of seed and labor it saves, will sow rape, turnip, carrot, onion, cabbage, sugar-beet, mangel, cucumber, sugar-cane, corn, or any other kind of seed, spreading as much fertilizer fit on any other root seeder. Hemme's Seeders are shipped freight paid direct from factory to your Station. Send to-day for information and take advantage of special introducing prices.

A. HEMME & SONS

Dublin, Ontario

JUST JERSEYS
Baldwin's
REGISTERED
COATICOOK, QUE.

Will Sell Few Fresh Jersey Cows
Jersey Bull one year, dam Mabel's Poet Snowdrop, 1st prize as calf, 1st Junior Champion as yearling, 2nd prize two-year-old Toronto, four times 1st Woodstock, four times shown. Bull six months, dam Oxford's Silver Bell, milked 38 lbs. day, score 172 points at Guelph, 140 days in milk. First calf 1915. I developed and was breeder of Beauty Maid Champion four-year-old butter cow of all breeds in Canada, also Woodstock Pat. Champion Berkshire Boar Eastern Prov. 1916-17.
IRA NICHOLS, R.R. No. 2, Burgessville, Ont.

Twenty-five Years Breeding Registered Jerseys and Berkshires
We have bred over one-half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.
HOOD FARM - LOWELL, MASS.

The Woodview Farm JERSEYS
London, Ontario
JNO. PRINGLE, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD
Herd headed by Imported Champion Rowner, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

The Edgeley Champion Herd of Jerseys
Present offering: Two young bulls dropped June 1918, one sired by Brampton Prince Stephen, dam Rhoda of Pine Ridge Farm, 10,801 lbs. milk 593 lbs. fat in one year. Others sired by Edgeley Bright Prince, son of Sunbeam of Edgeley, champion butter cow of Canada.
JAMES BAGG & SON (Woodbridge, C.P.R.; Concord, G.T.R.), EDGELEY, ONTARIO

LAKESIDE AYRSHIRES
Our bulls took the Senior Championship, Junior Championship and Grand Championship in Sherbrooke, and first in their respective classes at Quebec, in addition to taking the special prize for the best bull on the grounds any breed. We have others like them. Write for catalogue.
Geo. H. Montgomery
Dominion Express Building, Montreal

Westside Ayrshire Herd
1200 females with records up to 12,000 lbs. milk, and have two young bulls aged 12 and 16 months, with rich breeding at attractive prices for quick delivery. Correspondence and Inspection by **DAVID A. ASHWORTH, Denfield, R. 2, Middlesex Co., Ont.**

CITY VIEW AYRSHIRES
Bulls ready for service. Bull calves, some have 7 crosses of R.O.P. blood. Heifers just freshened. Two-year-olds bred for early fall. Nothing reserved at present. **James Begg & Son, St. Thomas, Ont.**

WHEN writing advertisers will you kindly mention The Farmer's Advocate.

Questions and Answers. Miscellaneous.

Blackleg in Cattle.
Is there any preventative for blackleg in cattle? We had several die when turned out last spring. Is there a vaccine for it, and if so where can it be secured?
A. G.

Ans.—There is a vaccine to be used as a preventative for blackleg. Write Dr. F. Torrance, Veterinary Director General, Ottawa, regarding the vaccine.

Treating Potatoes for Scab.
How much formalin should be used for a bushel of potatoes when treating for scab?
F. W.

Ans.—Treatment for potato scab consists of immersing the tubers for two hours in a solution of one pint of formalin to thirty gallons of water, after which the tubers should be put in clean sacks or bins. Treatment should be given before the potatoes are cut.

Killing Willow Trees.
What will kill young willow trees in swampy land? The old trees were cut a few years ago but the young shoots are now about an inch thick.
C. B.

Ans.—Willows are very persistent and are rather difficult to destroy without entirely removing the stump. Peeling the bark back will help to destroy them. Some claim that boring holes in the stump and filling with coal oil will kill the growth. However, you will likely find that it will be necessary to use the axe quite frequently in the removing of the new growth.

Warbles.
What is the cause of warbles in cattle forming a large lump of matter, instead of the worm coming out whole as it usually does? Can anything be done to help the present condition of affected animals?
D. A. B.

Ans.—The matter forming indicates that the worm has died and a little inflammation has set up. It is advisable to go over the animals and squeeze out the warbles and kill them. It may be necessary to use a sharp instrument to lance the lumps. After removing the matter and the warbles, it might be well to use a little disinfectant solution.

Heaves.
Is there any cure for heaves? G. E. M.

Ans.—The common causes of heaves are pre-existing diseases of the respiratory organs, severe exercise when the animal is not in condition, and the wrong method of feeding. Heaves are more common in horses that are fed heavily on dusty timothy and clover hay and allowed to drink large quantities of water after feeding than in horses that are fed on clean, high-quality feed. Chronic indigestion aggravates the disease. Heaves are a permanent disorder but may be relieved by careful attention to the animal's diet. Dusty hay should not be fed to horses. The animal should not be allowed to gorge itself on water or feed. When working, feed lightly on roughage and more liberally on grain. Sprinkling the hay and oats with a little lime-water is recommended.

Sweet Clover and Alfalfa.
What time of the year is it advisable to sow sweet clover and alfalfa. How much seed should be used per acre? The field I was thinking of sowing it on has not been seeded down for fifteen years. The soil is of a sandy nature and about half the field is rolling. I was thinking of working the field until about the middle of July and then sowing the hilly part with sweet clover and the level part with alfalfa, without a nurse crop. T. J. C.

Ans.—Sweet clover and alfalfa both do very well when sown alone on well prepared soil. Sown in July or in the spring. Both crops may be sown with a nurse crop in the spring. Alfalfa requires a soil where the water-level is several feet below the surface. It is a crop which does well in some sections but is a failure on others. On the heavy clay of Haldimand County it grows to perfection. Sweet clover does well almost anywhere. It is a very good pasture crop but alfalfa is superior for hay. From 15 to 20 lbs. of seed per acre is very good rate of seeding.

APRIL 1918

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Questions and Answers.
Miscellaneous.

Blackleg in Cattle.
Is there any preventative for blackleg? We had several die when we last spring. Is there anything that can be done about it, and if so where can it be had?
A. G.

There is a vaccine to be used as a preventative for blackleg. Write to the Director, Veterinary Service, Ottawa, regarding the vaccine.

Soaking Potatoes for Scab.
What formalin should be used for soaking potatoes when treating for scab?
F. W.

Soaking potatoes for scab treatment for potato scab involves immersing the tubers for two hours in a solution of one pint of formalin in ten gallons of water, after which the tubers should be put in clean sacks or barrels and should be given the usual treatment before they are cut.

Planting Willow Trees.
How can I kill young willow trees in a field? The old trees were cut down but the young shoots are still an inch thick.
C. B.

Willow trees are very persistent and difficult to destroy without the use of kerosene. Peeling the bark will help to destroy them. The use of that boring holes in the trunk with coal oil will kill them. However, you will likely find it necessary to use the kerosene frequently in the removing of the willow.

Warbles.
What is the cause of warbles in cattle? A large lump of matter, instead of coming out whole as it usually does. Can anything be done to prevent this condition of affected cattle?
D. A. B.

Warbles in cattle are caused by matter forming in the lungs. The animal has died and a little inflammation is set up. It is advisable to examine the animals and squeeze out the matter and kill them. It may be necessary to use a sharp instrument to remove the matter. After removing the matter, it might be well to use a disinfectant solution.

Heaves.
What is the cause of heaves? G. E. M.

Common causes of heaves are diseases of the respiratory tract, exercise when the animal is cold, and the wrong method of feeding. Heaves is more common in animals that are fed heavily on dusty hay and allowed to breathe in dusty air. Dusty hay should not be used. The animal should not be allowed to gorge itself on water or feed. Working, feed lightly on more liberally on grain, hay and oats with a little clover.

Clover and Alfalfa.
Is it advisable to sow clover and alfalfa together? How much should be used per acre? The alfalfa is sown in the fall and the clover in the spring. How long will it last? T. J. C.

It is advisable to sow clover and alfalfa together. The alfalfa should be sown in the fall and the clover in the spring. The alfalfa will last for several years. The clover will last for several years. The alfalfa is a very good pasture and the clover is a very good hay. From one acre you can get a very good crop of alfalfa and clover.

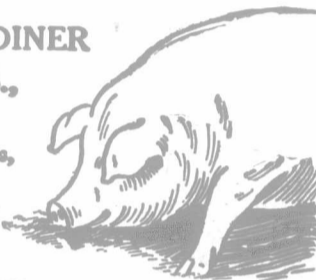
Between Weaning and Fattening, Feed

GARDINER'S PIG MEAL

With skim or separated milk it carries the young pigs along without a check from weaning, because it suits their digestion and contains the richness of the mother's milk. They build up on it very fast, and reach the fattening stage so quickly that you get a chance to make maximum profits on them.

Gardiner's Pig Meal comes in 25, 50 and 100-lb. bags. If your dealer hasn't it, write us for prices, and for information about Gardiner's Calf Meal, Ovatum, Sac-a-fat and Cotton Seed Meal.

GARDINER BROS.,
Feed Specialists,
SARNIA, Ont.
17



Summer Hill Oxfords



The Sheep for the Producer, Butcher and Consumer.
Our Oxfords Hold an Unbeaten Record for America.

We have at present a choice offering of yearling ewes and rams, as well as a lot of good ram and ewe lambs—the choicest selection of flock-heads and breeding stock we have ever offered.

PETER ARKELL & SONS
R. R. No. 1, Teeswater, Ontario
H. C. Arkell W. J. Arkell F. S. Arkell

EASIER SHEARING

Shear with a machine—get more and better wool—saves you tired arms or swollen wrists. Do it quickly without scarring the sheep. Machine shearing gets 15% more wool and leaves a smooth even stubble that will increase next season's growth. Get a Stewart No. 9 Ball Bearing Shearing Machine. If your dealer can't supply you send us his name. Write for catalogue.

CHICAGO FLEXIBLE SHAFT COMPANY
Dept. A 161, 12th Street and Central Avenue, Chicago, Ill.

FOR SALE

Shropshire ewe lambs and young ewes, two Clydesdale Stallions, four Shorthorn bulls.
W. H. Pugh - Myrtle Station, Ont.

Shropshires and Cotswolds—A lot of young ewes in lamb to imp. ram, and ewe lambs, good size and quality, at reasonable prices.
JOHN MILLER, Claremont, Ont.

Yorkshires

We are now booking orders for our young pigs. Write for prices.

WELDWOOD FARM

Farmer's Advocate, London, Ontario

Four Duroc Sows or Gilts

to Farrow in April; also young service boar. State lowest price. F.O.B. Abbotsford, Que. Box 1, Abbotsford, Que.

Questions and Answers.
Miscellaneous.

Irregular Line Fencing.

A and B own adjoining farms. The line between them has never been surveyed by a legal surveyor. The rail fence has been kept up part through cleared land and part bush by mutual agreement both parties knowing that it was not in its right place or straight but agreeing mutually that when a new fence was being built that it would be put in its proper place. Now B sold out to A and C to D and the trouble now arises between A and D.

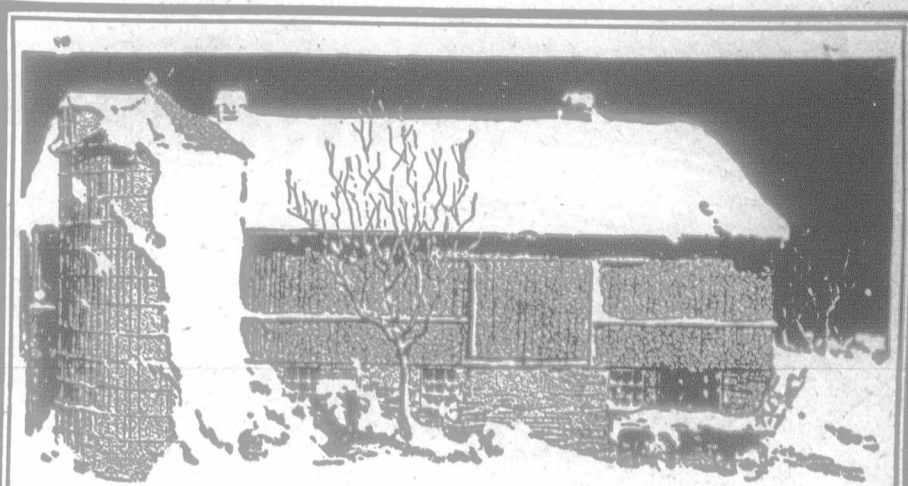
1. Does the ten year limit of peaceful possession affect such a case?
2. If the land was equally divided and the lines staked by two neighbors both disinterested parties and A and D agree to their measurements and setting of stakes would it be legal?
3. Or would they have to get a legal surveyor?
4. A has often mentioned that said line fence was not in its proper place to B. C. and D. Would that be sufficient notice that it was disputed?

Ontario. F. I. E.
Ans.—1. No.
2. Yes.
3. No.
4. Yes.

Settling up an Estate.

1. If a man owning a farm rents it to his son and makes his will that the son is to pay a stated amount to the several members of the family stated in the will within three years after the death of the last parent, can the executors compel the son to pay off the shares to the several members of the family before the three years expires?
2. Can the Executors compel the son to pay over the money to the several members of the family mentioned in the will before they have signed off their claim, one living in Chicago, one in New York and one in California?
3. Should the Executors have the papers sent to the several members mentioned in the will and have them sign off their claim and have the deed ready for the son at the time he pays the money?
4. Should the son pay the money to the Executors or send it direct to each member so mentioned in will?
5. What commission can the Executors collect for their service rendered?
6. Who should pay the Executors for their service?
7. What commission can the solicitor collect that the Executors employ to do the business?
8. Who should pay the solicitor?
9. If the solicitor and Executors are all in the same office room when the son writes out the cheques for the money for the several members mentioned with the bank exchange included, and none of them ever mention anything about their fees or the allotted portion of their fees to be kept back can they compel the son to pay all their commission?
10. If the son refuses to pay all the fees which the solicitor and Executors claim they should have, can the solicitor or Executors legally hold the deed until he does pay it?

Ontario. V. M. V. S.
Ans.—1. No.
2. 3 and 4. The remittance should be made through a Bank, and forwarded along with releases to be executed by the legatees at the time they actually receive payment from the Bank's agents. The matter should be attended to conjointly by the Executors and the testator's son. The precise form the release should take depends upon the wording of the will and is a matter for consideration by the Executors' Solicitor.
5. Their is no fixed allowance. The amount whatever the parties interested may agree upon, or failing such agreement, whatever the Surrogate Judge may, upon the passing of the Executors' accounts, consider reasonable. He may or may not adopt a commission basis for the allowance.
6. The son—assuming that he is the residuary legatee and devisee.
7. He is not paid by Commission but by fees for his legal services rendered.
8. The Executors, they in turn charging the amount to the Estate with, of course, the result that it comes out of the residue.
9. That would not affect their legal right to be paid, for their services and disbursements out of the Estate.
10. Yes.



June Pastures in Winter Compactly Stored in a Silo

NEXT winter, when pastures are covered with snow, you will appreciate the great saving and convenience of a silo full of rich, juicy silage. It will be like having June pastures in January. Cows produce the same big flow of milk on silage as on pasturage, and you will get it right at the time when dairy products are worth the most. In spite of the great milk-producing value of silage, it is actually 15 to 20 per cent cheaper than any other feed you can use.

Place Your Order Now for an IDEAL GREEN FEED SILO

Don't go through another winter without silage. Now is the time to get your silo erected so that it will be ready when the crop is ready. Nothing is gained by delay, and if you wait until the last minute you will likely be put to extra expense to get the silo up in time.

Ask for our large illustrated silo catalogue that shows every detail of this silo—how the parts are made and put together, and the quality of the material used.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER

LINCOLNS C. Nicholson of Horkstow LINCOLNSHIRE, ENGLAND

has for sale Pedigreed Lincoln Long Wool rams and ewes from his world-famous flock of ALL DUDDING-BRED SHEEP. By winning the CHAMPION and "ALL" the prizes in the two-shear and shearing ram classes at the Royal Show of England, 1915, all previous records were broken. Coates Shorthorns and Lincoln Red Shorthorns also for sale. STATION—BARNETBY

Maplehurst Herd of Tamworth Swine—Present offering: A choice lot of young stock, either sex, from the leading herd of Canada for the last 15 years. We also have standard-bred horses. Present offering: One first-class young stallion; S-C. White Leghorns. D. Douglas & Sons, R.R. No. 4, Mitchell, Ont.

Meadow Brook Yorkshires
Sows bred, others ready to breed. Six large litters ready to wean. All choicely bred and excellent type.
G. W. MINERS, R.R. No. 3, Exeter, Ont.

WALNUT GROVE TAMWORTHS
My present offering: Young Tamworth sows and boars three months old. Also young pigs ready to wean.
C. R. JAMES (Take Radial cars from North Toronto) Richmond Hill, Ont.

SPRINGBANK O. I. CHESTER WHITE SWINE
Scotch Shorthorns. Sows bred, boars fit for service, from the best strains of the breed priced to sell. Satisfaction guaranteed. Inspection invited. Wm. Stevenson & Son, Science Hill, Ontario.

BERKSHIRE PIGS
Boars ready for service, sows bred and ready to breed. Also some young things bred from winning stock. Prices reasonable. JAMES CLARKE & SONS, Puslinch, R.R. No. 1, Ontario.

ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock all ages. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO. Langford Station on Brantford and Hamilton Radial.

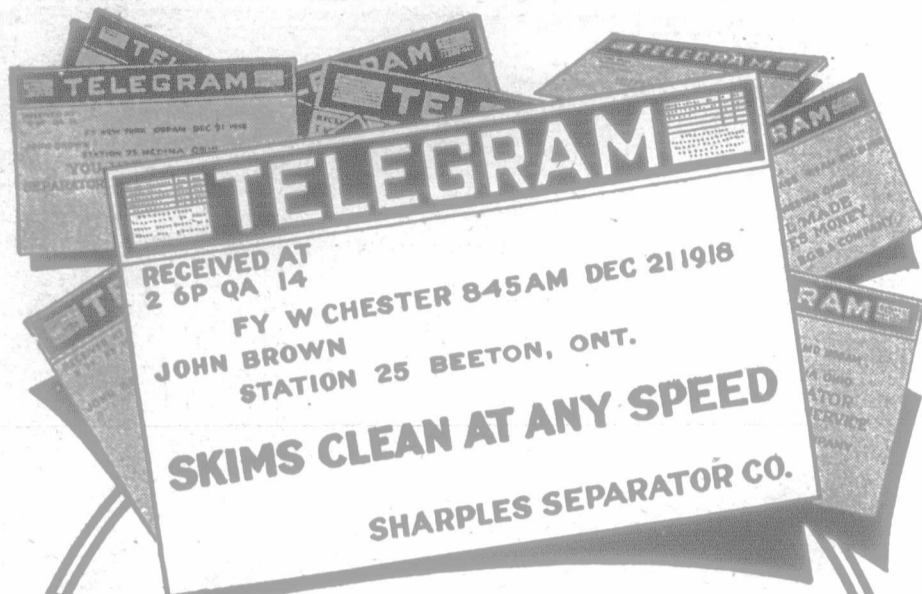
Big Type Chester Whites—Three importations in 1918. 25 bred sows and gilts for sale, some imported, others by imported sires. All bred to imported boars.
JOHN G. ANNESSER, Tilbury, Ont.

TAMWORTHS
Boars ready for service—a choice lot to select from; also young sows bred for spring farrow. Write: JOHN W. TODD, R.R. No. 1, Corinth, Ont.

BERKSHIRES—My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.
ADAM THOMPSON, R.R. No. 1, Stratford, Ont. Shakespeare Station G.T.R.

Invergie Tamworths
Still to the fore, wif a bonny bunch o' gilts, bred and ready to breed; a few weaned laddies. Call in as ye're passin' or write me a bit note. Leslie Hadden, Pefferlaw, Ont., R.R. No. 2.

FOR SALE
Litter of Pure-bred YORKSHIRE PIGS. Apply E. GOFF PENNY P.O. Box 1635 Montreal

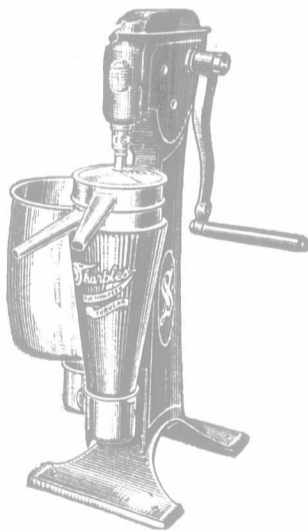


Which Separator did John Brown Buy?

Suppose you were Farmer John Brown and you wanted to buy a separator. You asked several separator manufacturers to send you a *ten-word* telegram, stating in the most convincing way, why their separator was the one you should buy. Sharples would only need *five* words: "Skims clean at any speed," and you would not have to ask for anything further.

SHARPLES SUCTION-FEED CREAM SEPARATOR

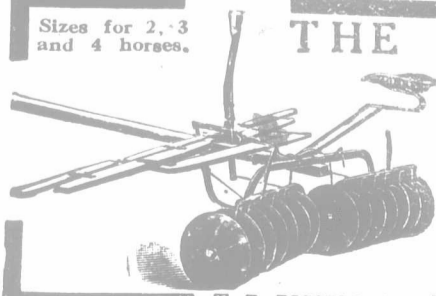
No other separator manufacturer could put into five words or *fifty* words, as convincing an argument as "Skims clean at any speed." They would tell you about the durability of their separator, that it was well-known, that it cost less and everything else *but* the *one* big reason why you need a separator—to get *all* the butterfat out of your milk. Sharples *also* has the exclusive advantage of no discs in the bowl; knee-low tank; once a month oiling system; durable construction and, besides, it is the pioneer North American Separator. Write for catalog to nearest office, addressing Dept. 78



"There are no substitutes for dairy foods"
THE SHARPLES SEPARATOR CO.
TORONTO, ONT. REGINA, SASK.

Over 2,425,000 Sharples Separators in Daily Use DC-85

Sizes for 2, 3
and 4 horses.



THE BISSELL DISK

has made a great record throughout all Canada. There are good reasons why this is so. Balanced Right—Does not hump up. Improved Plate—Cuts and turns soil over. Hitches well Back—Easy draught. This Disk has several imitators, but no equal. None genuine without the name "BISSELL." Test trials given on hard land with anything that cultivates. Write Dept. W for free Catalogue. 92

T. E. BISSELL CO., LIMITED, ELORA, ONT.

We have doubled our factory capacity and are determined to supply our customers far and near. See ad. also on page 740.

Our School Department.

Relationship of the School Garden to the Classroom.

BY L. A. DE WOLFF, M. SC.

The school garden helps the class-room in, at least, two ways. First: it gives that healthful exercise so necessary to school children, at a time when they most need it. In this, too, it furnishes variety, and breaks the monotony of school life. But the second and most important consideration, is that it vitalizes school work. The principles of mechanical drawing are mastered while drawing a plan of the garden to scale. Business methods are learned when buying the seeds; and, later in the year, when banking the profits. Many a boy gets his first lesson in good manners and community welfare when he is taught not to walk in his pupil-neighbor's garden plot.

The lessons on soil physics, in connection with conservation of moisture, make a tangible introduction to general physics in the class-room. Identification of weed seedlings and garden seedlings is the first step toward field botany. The control of these leads at once to economic botany.

What better arithmetic problems can be given than the boy's own problems to find how much seed or how much fertilizer his garden requires, when the tabulated amounts given are per acre?

The insect pests furnish good lessons in entomology. The insecticides and fungicides form a natural basis for lessons in chemistry. The covering of plants to protect them from late spring frosts introduces a phase of physical geography not often well taught.

The written descriptions of garden operations furnish unlimited exercise in English composition. No drawing lessons could be more attractive than those based on the garden and its products; and no reading should be more suitable than some of the best garden compositions written by the students.

Commercial geography will, perhaps, be helped more than any one subject.

In the hands of the skilful teacher, the school garden is the connecting link between the school and the real world.

Testing Germinating Qualities of Seed.

J. G. ADAMS, UNIVERSITY OF TORONTO SCHOOLS.

In planning for the school garden the importance of getting good seed cannot be over-estimated. How often is the success of the garden spoiled by sowing seed which fails to germinate, or which produces only weak, sickly plants? The quality of the seed determines the vigor and value of the crop just as much as the quality of the soil or the methods of cultivation. And unless good seed be obtained these other factors are valueless. The seeds should be fresh, plump, bright in color, and of good weight for the kind of seed. But the quality cannot be accurately told from the appearance. A sample of the seed should be tested before planting to learn the percentage of germination. And this may furnish also some indication of the vigor of the plants likely to be produced.

In testing for germination moisten a piece of cotton flannel or a piece of blotting paper and lay in a dinner plate. Then count out exactly one hundred seeds and place them in the centre. Cover with another moist cloth or blotter and invert another plate over them. For small seeds the blotters may be marked off into four sections with a lead pencil, and four kinds can be tested at once. The plates should be kept in a warm place. On about the third day the seeds that have germinated should be taken out and a record kept of them. Some seeds will germinate in a few days, while others may require as much as two weeks.

Beet and chard seeds normally test out more than one hundred per cent., because each of these seeds is really a fruit, which usually contains more than one embryo.

The vigor of the seedlings should be noted and a record made of them. When removed from the dish they may be grown for a few days on a separate piece of moist blotting paper or cotton flannel kept in a warm place. Note the percentage number of seeds giving healthy plants of at least average growth.

None of the samples of seed should run below a seventy-five per cent. germination test, and should be nearer ninety and ninety-five per cent. to give satisfactory results.

A Pound of Butter.

BY H. H. DEAN.

The oil of butter is especially well adapted for oiling the brain. Brain-workers should use plenty of good butter and never any of the substitutes for cow's butter, such as "oleo," "peanut-butter," etc.

Butter is "concentrated sunshine," hence good butter tends to make people more "sunshiny" in disposition. It is also a "heat producer," and may be used more largely in winter when the weather is cold. It furnishes energy to do physical and mental work.

Butter consists of the tiny milk-fat globules (so small that it requires about ten thousand of them lying side by side to make a line an inch long) which are massed, or packed together, by means of a churn. After massing the fat globules, the butter-milk is removed, the butter is washed with clean, cold water, salt is added to taste, then the butter is worked to mix the salt through the butter, expel the surplus moisture and to make it compact for printing or packing.

The finest flavored butter is made from sweet cream, and the butter is salted very lightly. Such butter has the true "creamy," natural flavor of fine butter. Ordinarily, however, after the cream is separated from the milk by setting it for twenty-four to thirty-six hours in shallow pans, or deep cans, or by running the milk through a cream separator, the cream is soured or ripened, making what is known as ripened or sour cream butter.

Butter for local markets and home use is best made into prints weighing one pound. All farm dairy butter, put up in prints or boxes must be branded with the word "Dairy," and such butter may not have the word "Creamery" on the wrapper or package.

Butter made during the summer may be packed solidly in an air-tight package (crock, tub, or box), and if kept in a cool place this will be quite palatable in winter, when butter is scarce and dear. The months of June and September are usually the best months for packing butter.

Good butter is a wholesome food, and should be used largely on the tables of Canadians. Butter substitutes should find no place in Canada.

A Community's School Gardening.

BY S. B. MCCREADY.

With the foundation securely laid in the general unselfish, active interest of the people of the community, plans for the summer care of the garden can give little anxiety. It is only a matter of good organizing. Everybody will be helping. The trustees will do their share. The mothers' committee will do their share. The ex-pupils will be strong supporters and protectors. The School Progress Club will oversee the pupils' work. The school will be alive and a thing of beauty all summer, even if the teacher cannot be on hand to join in the many good times her people have had at their school. When she comes back, she will find that her community still holds together round the school garden. A simple little school fair in September will be the fitting climax to the community-building and agricultural-education enterprise.

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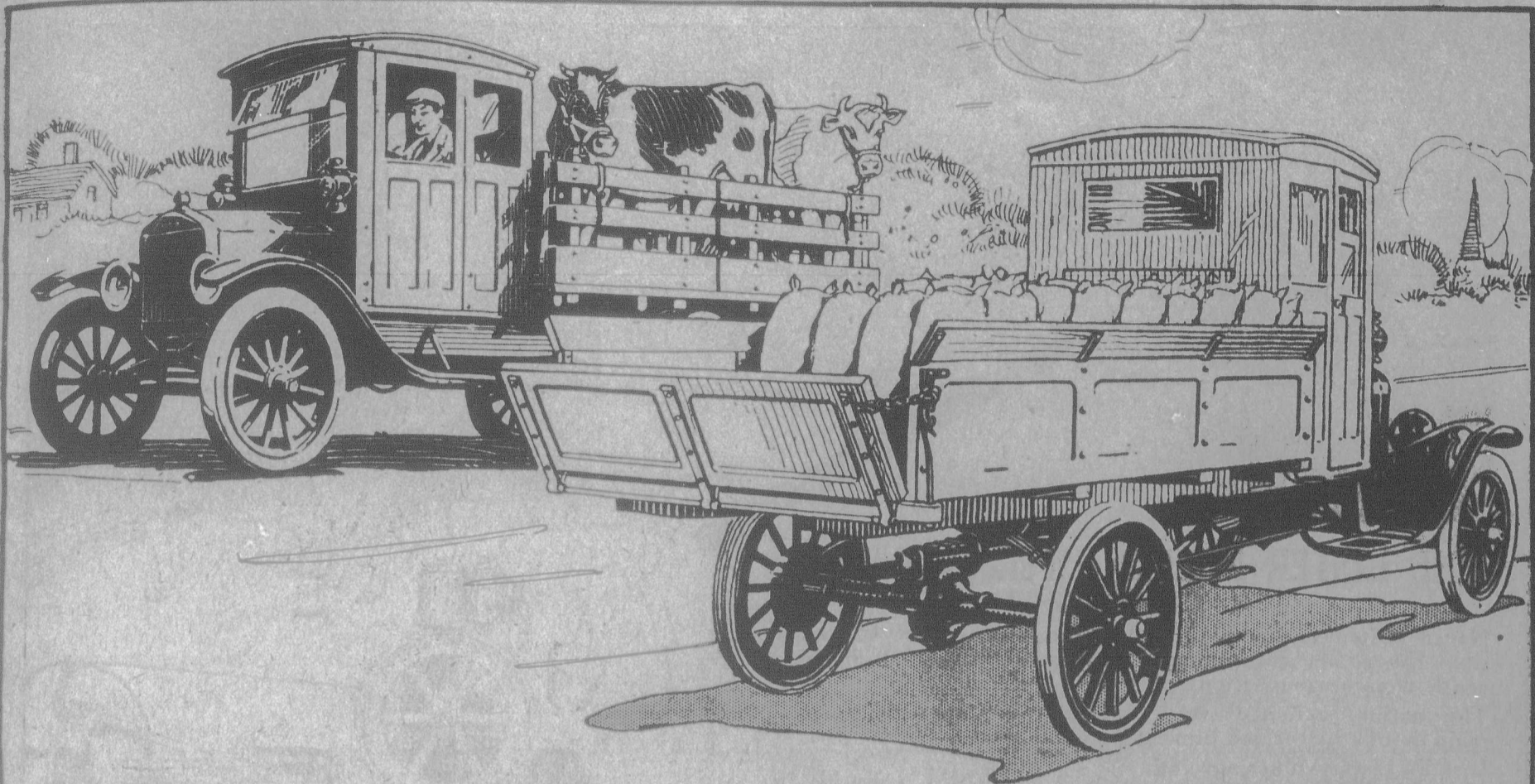
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Does a Farmer Need a Truck?

AMERICAN farmers use more trucks than either manufacturers or merchants.

This is a positive answer to the question: Can a farmer use a Motor Truck at a profit?

The reason for this strange fact is simply this.

The farmer who lives miles from a railroad is practically shut off from the best markets. Everything he sells brings him less than the market price because he is so far away. Everything he buys costs him more because it must be hauled so far. He loses both going and coming. *Motor Trucks are wiping out those distances.*

The farmer with a Ford Truck practically lives next door to the market.

- He has a choice of markets.
- He becomes more independent.
- He can market his goods when and where he pleases.
- He sells his crop to the very best advantage.

Any practical farmer who turns this over carefully in his mind, must see that he has a chance to better his position by the use of a Ford Truck. Hauling is a big part of his work. It is cheaper to haul with a Ford Truck than with a team and wagon. It is quicker. It is easier work for him.

But consider the time and labor the farmer can save with a Ford Truck. With a team the trip to town takes the better part of a day.

A Ford Truck makes the same trip in two or three hours!

When labor is so scarce, what farmer can afford to waste day after day of his valuable time?

Ford Trucks Complete With Body and Enclosed Cab

Ford One-Ton Trucks are now supplied, if desired, with standard truck bodies. Two types are kept in stock, ready for immediate delivery, the Stake Body and the Express Body.

Both standard bodies have the Enclosed Cab which protects the driver in every kind of weather. The windshield is the two-way double-ventilating type; keeps out the storm; keeps the cab cool in summer.

These two standard bodies are the type most widely used and are adaptable to the ordinary hauling problem. They insure the greatest utility and longest service from the Ford Truck. They enable any Ford Dealer to supply you with a complete truck without annoying delays.

See the Ford Dealer. See these complete Ford Trucks. Consider the matter from every angle; the cost of feeding horses against the cost of running a Ford Truck; the time you lose on the road; the money you lose by being so far from the best markets. There is only one conclusion you can come to. You will have a Ford Truck.

Ford One-Ton Truck (Chassis only) \$750 f. o. b. Ford, Ont.

Freight charge to London, \$15.00; Toronto, \$17.00; Montreal, \$22.00; St. John, \$31.00; Winnipeg, \$47.00; Regina, \$69.00; Saskatoon, \$66.00; Calgary, \$77.00; Vancouver, \$98.00.

For either Stake or Express Body, in lead coat with cab but without doors

\$128.50	..... F. O. B. Ford
\$133.00	..... F. O. B. London
\$134.00	..... F. O. B. Toronto
\$135.00	..... F. O. B. Montreal
\$137.00	..... F. O. B. St. John

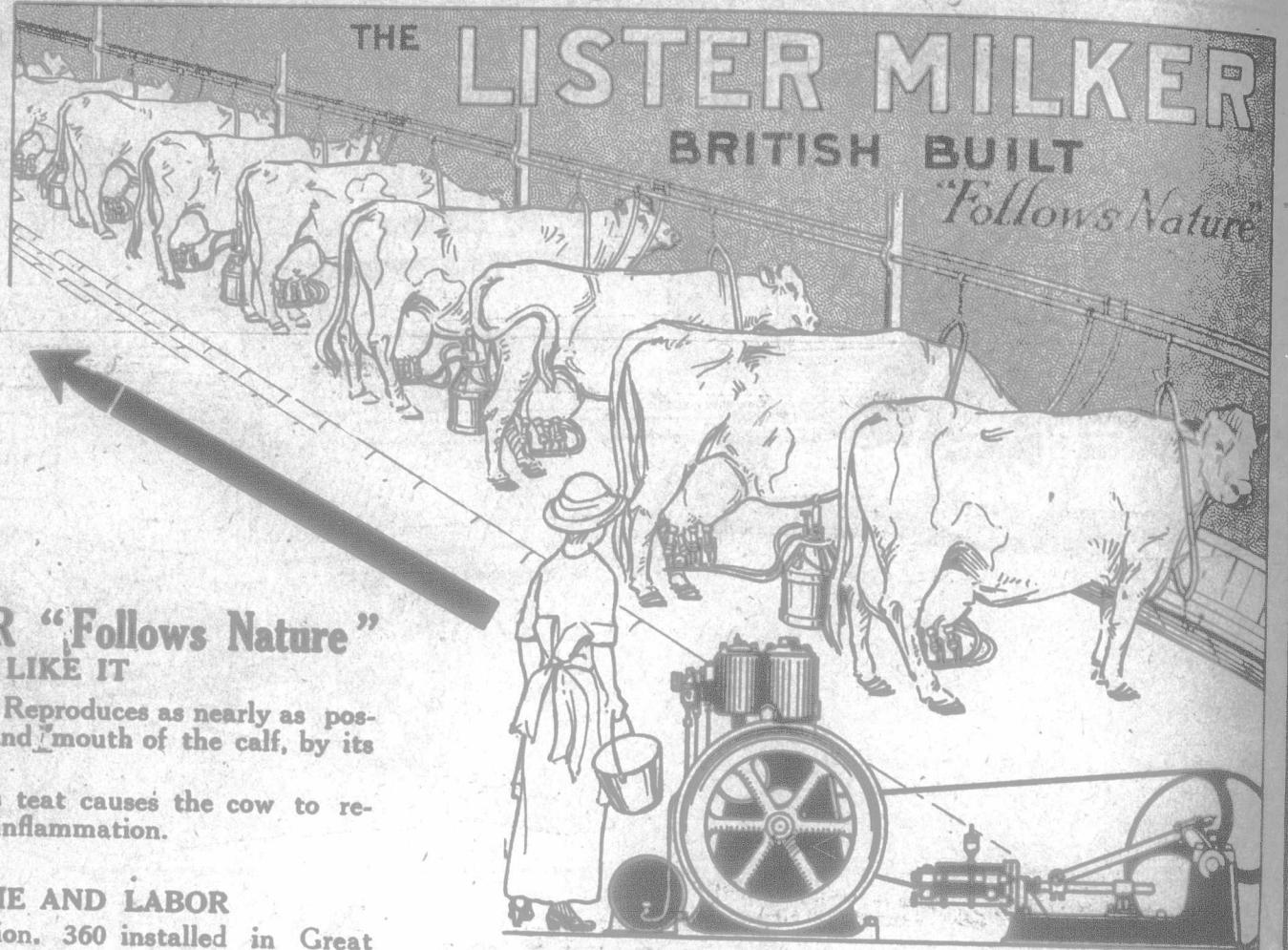
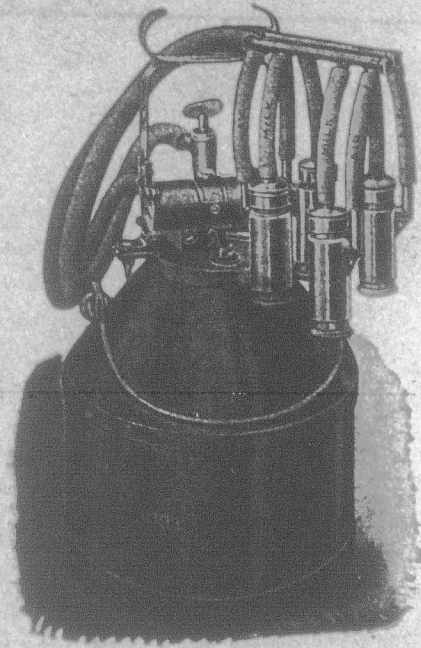
Ford One-Ton Truck

For either Stake or Express Body, in lead coat with cab but without doors

\$140.00	..... F. O. B. Winnipeg
\$143.00	..... F. O. B. Regina
\$143.00	..... F. O. B. Saskatoon
\$147.00	..... F. O. B. Calgary
\$151.00	..... F. O. B. Vancouver

If painted job desired, add \$4.00 to above prices. If doors desired on cab, add \$6.00 to above prices.

Ford Motor Company of Canada, Limited, Ford, Ontario



THE LISTER MILKER "Follows Nature"
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The natural action on the cows teat causes the cow to remain in milk longer and prevents inflammation.

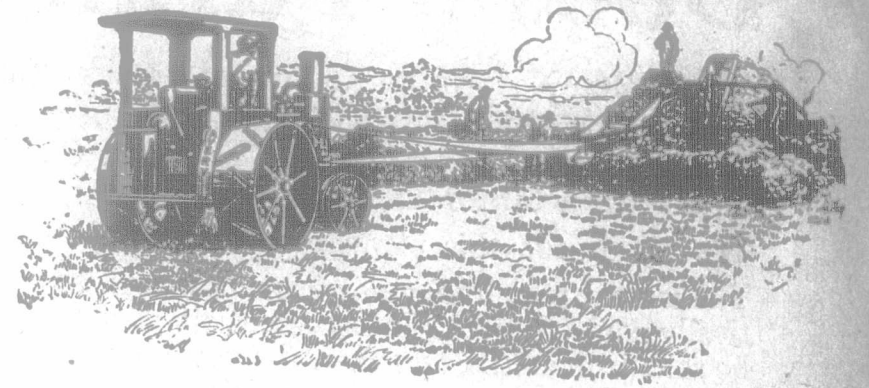
Instal a Lister Milker now, and
SAVE MONEY, TIME AND LABOR

Over 1,000 in successful operation. 360 installed in Great Britain in as many days.

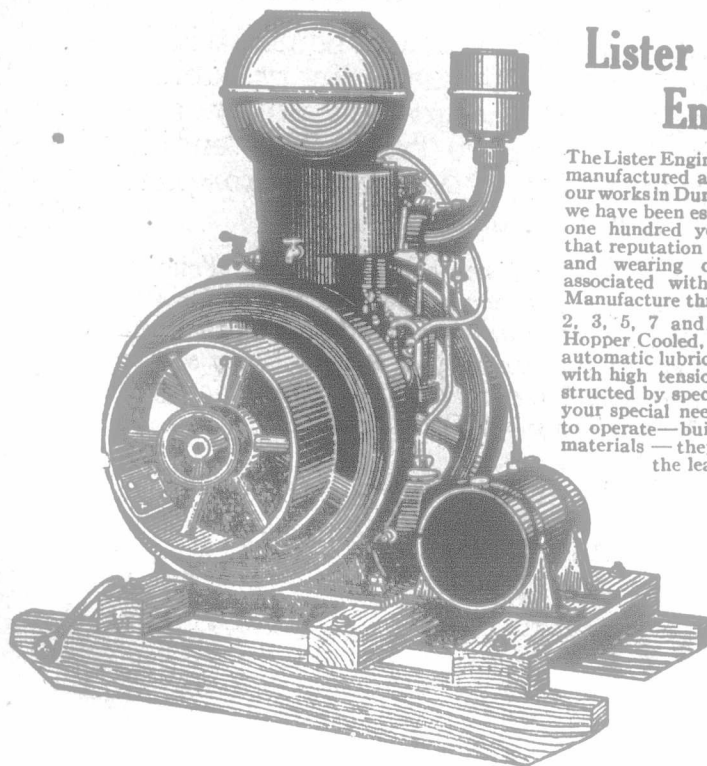


PLAN YOUR TIME THIS YEAR IN HOURS OF TRACTOR WORK INSTEAD OF DAYS OF HORSE WORK.

A Tractor will enable you to cultivate and seed much more ground than is possible with horses—and with less hired help. When you buy the AVERY TRACTOR you get a machine that has been tried out and proven a success by tens of thousands of farmers in this and other countries. You get a tractor that has been entered in every important contest and demonstration and has been put to the hardest tests. SEVEN SIZES—There's an Avery to suit the size of every farm.



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The Lister Engine has been designed, manufactured and standardized at our works in Dursley, England, where we have been established for nearly one hundred years, and maintain that reputation for reliable service and wearing qualities which is associated with goods of British Manufacture throughout the world.
2, 3, 5, 7 and 9 h.p.—Standard Hopper Cooled, throttle governed, automatic lubrication and equipped with high tension magneto. Constructed by special means to meet your special needs. Simple—easy to operate—built of highest-grade materials—they do the most for the least money.

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Guaranteed greater capacity for size than any others.

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Over 50,000 in use in Canada.

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